DOCUMENT RESUME

ED 032 719

EF 003 119

By-Katz, William A., Ed.; Swartz, Roderick G., Ed.

Problems in Planning Library Facilities: Consultants, Architects, Plans and Critiques; Proceedings of the Library Buildings Institute. (Chicago, July 12-13, 1963).

American Library Association, Chicago, Ill.

Spons Agency-American Library Association, Chicago, Ill. Library Administration Div.

Pub Date 64

Note-208p.

Available from-American Library Association, 50 E. Huron Street, Chicago, Illinois 60611

EDRS Price MF-$1.00 HC Not Available from EDRS.

Descriptors-*Building Plans, College Libraries, *Library Facilities, *Library Planning, Medical Libraries, Public Libraries, School Libraries

Library facilities and the inherent planning problems involved are discussed in terms of--(1) the library building consultant, (2) college and university libraries, (3) public libraries, (4) school libraries, and (5) hospital and institution libraries. Floor plans, architectural renderings, and photographs of various facilities are included along with critique discussions. (RK)

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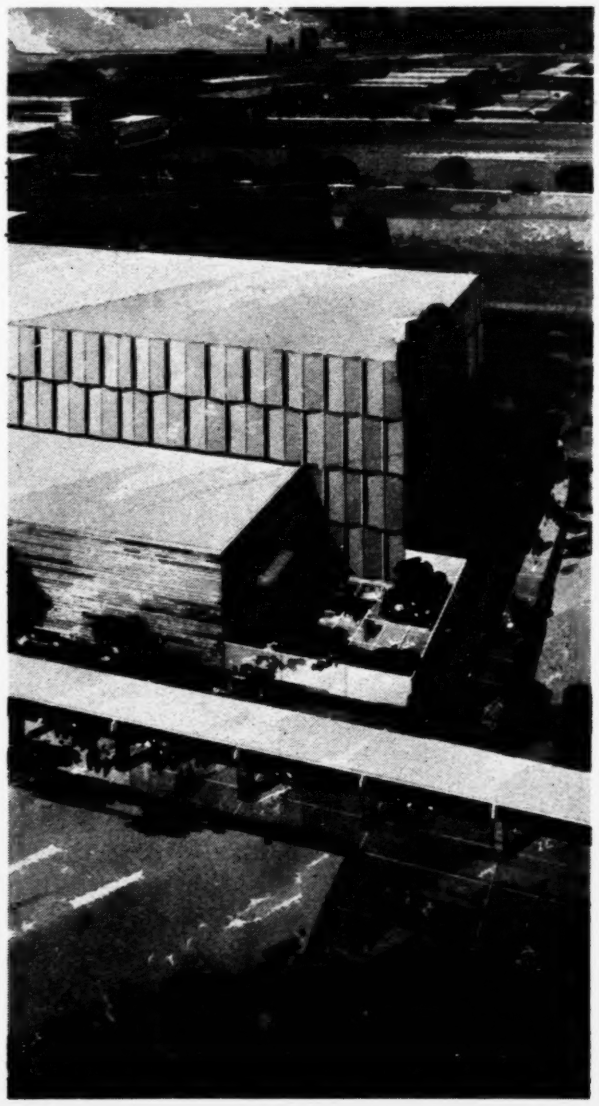

Problems in Planning Library Facilities

Consultants, Architects, Plans, and Critiques

Proceedings of the
LIBRARY BUILDINGS INSTITUTE
Conducted at Chicago, July 12-13, 1963

Sponsored by the
LIBRARY ADMINISTRATION DIVISION
AMERICAN LIBRARY ASSOCIATION

Edited by
WILLIAM A. KATZ *and* RODERICK G. SWARTZ

EF 003 119

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Library of Congress Catalog Card Number 64-19851

Cover:

University of California Library, Riverside
Architect's rendering
of ultimate library facilities
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Foreword

The Library Buildings Institute, sponsored by the Library Administration Division and meeting prior to the general conference of the American Library Association, has proved to be a well-received endeavor. Although ten building or equipment institutes have been held in the last twelve years, interest still seems to be high. This year's attendance was the highest on record with a total number of 528. Another first for the 1963 Institute was the fact that for the first time the Hospital and Institution Libraries had a major program.

The audience for these Institutes is composed of three groups. First, there are the architects and librarians who are presently engaged in the advanced planning or construction of a new library. Secondly, librarians and architects who have had a great amount of experience in planning library buildings attend as a service to their profession. Finally, there is that group which is desirous of increasing its knowledge with the hope of planning a building in the near future.

Besides those individuals mentioned in the text, acknowledgment should be given to Raymond G. Erbes, Frank Gibson, Morrison Haviland, Edward Heintz, Virginia McJenkin, Ruby Martz, Miriam Peterson, and Howard Rovelstad, who chaired various sessions of the Institute.

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This document contains many plans and drawings which may not be completely legible in reproduction. We feel the total document to be of sufficient importance to reproduce, taking this fact into consideration.

Introduction

Five hundred and twenty-eight registrants were present for the Library Buildings Institute, sponsored by the Library Administration Division, American Library Association, in Chicago, Illinois, on July 12-13, 1963. Not only were there 474 librarians, including 170 from colleges and universities, 217 from public libraries, 67 from schools, and 20 from hospitals and institutions; there were also 41 architects and designers and 13 suppliers. Of this number, 75 were involved as program participants.

The Waldorf Room of the Conrad Hilton Hotel was the setting for the first meeting on Friday morning, which was a general session chaired by Thelma Reid, San Diego City Schools Library, chairman of the LAD Buildings and Equipment Section.

Speaker for the morning was Keyes Metcalf, Librarian Emeritus, Harvard University, who discussed the library consultant. While he placed special emphasis upon the duties of the consultant, he also mentioned the reasons for hiring a library consultant, the way to select him, when he should be brought into the planning, and how much he should be reimbursed for his efforts. The consultant, said Metcalf, can be of value at the time of the preliminary investigations and can continue to advise until the final details of equipment selection.

The place of the consultant in the building team was discussed further by a panel moderated by Ralph Ulveling, Detroit Public Library. The panelists—Charles Mohrhardt, Detroit Public Library; Robert Muller, University of Michigan Library; Robert H. Rohlf, Illinois Public Library Development Project, now at the Dakota-Scott Regional Library, West St. Paul, Minnesota; and Donald Thompson, Wabash College Library—felt that the consultant should know the language of both the librarian and the architect so that he could act as arbitrator and adviser for the other members of the building team. He should be amiable, yet willing to express and hold his opinion on matters he felt were pertinent.

Beginning with the Friday afternoon session, the participants split into four groups. These groups—college and university, public, school, and hospital and institutional—each followed a different pattern, but emphasized the building team and its development of the building program.

The college and university session devoted its time to the presentation and critique of individual libraries. In two sessions, plans and critiques of libraries at various stages of planning were presented. These included the Francis A. Countway Library of Medicine at Harvard; San Diego State College Library; University of Waterloo Arts Library at Waterloo, Ontario; Musselman Library at Bluffton College, Bluffton, Ohio; Western Kentucky State College Library; and the Asbury Theological Seminary Library at Wilmore, Kentucky. In addition, presentations were made of libraries at the Chicago campus of the University of Illinois, the State College of Iowa, the University of Notre Dame, and the University of California at Riverside, where buildings are either under construction or completed.

The public library section led off its individual meetings with a talk by Hurst John, architect, of Columbia, Missouri, on "Programming before Planning," and a discussion by H. A. Fagerstrom, of the Housing and Home Finance Agency, Chicago, on the possibility of federal aid for public library construction. Mr. John emphasized the importance of programming before building so that the mistakes and disagreements could be made on paper before they were immortalized in brick and mortar. Mr. Fagerstrom outlined the various government grants open to qualified public libraries for construction.

On Friday evening, after dinner with the other three groups, the public library group came back to hear a panel discussion on the "Role of the Architect, Engineer, and Librarian in Library Planning." Librarians A. Chapman Parsons, of the Public Library, Alliance, Ohio, and Lester Stoffel, of the Oak Park (Illinois) Public Library, and architects William Fyfe, of Perkins & Will, Chicago, and James Hammond, of Hammond & Roesch, Chicago, moderated by Frederick Wezeman, Associate Professor of the Library School, University of Minnesota, outlined and developed the role of the various members of the building team.

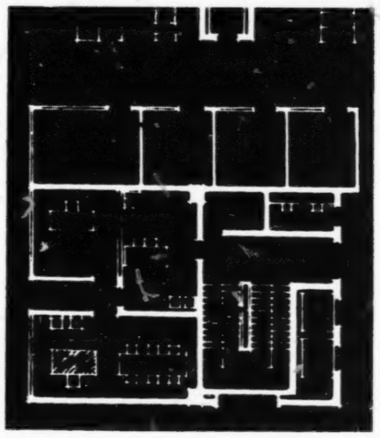
The rest of the session was spent in presentation and critiques of individual libraries. These included the Manitowoc (Wisconsin) Public Library, the Lake County (Indiana) Public Library at Crown Point, and the Ogden (Utah) Public Library.

Programming for effective buildings was the topic at the first meeting of the school libraries section. John L. Cameron, U.S. Office of Education, Washington, D.C., told what the architect needs to know in regard to the school library program, while Blanche Janecek showed how the High School Laboratory School at the University of Chicago had been planned and developed according to a program. Mildred L. Krohn, Shaker Heights City School District, Ohio, completed the afternoon's meeting with a talk on "Remodeling To Fit a Program." In the Friday evening period, following a talk by Mrs. Georgia Rankin Cole, School of Library Science, University of Kentucky, on the pros and cons of departmentalizing the school library, two examples of departmentalization—York Community High School, Elmhurst, Illinois, and Homewood-Flossmoor High School, Flossmoor, Illinois—were presented.

Saturday morning's program evolved around the centralized elementary school library and its place as an instructional materials center, the main talk being given by Alice Lohrer, Graduate School of Library Science, University of Illinois. The Lauderdale Manors School at Fort Lauderdale, Florida, and the Chantilly Elementary School at Charlotte, North Carolina, were the elementary schools presented.

The hospital and institution librarians, which for the first time had a complete section devoted to their interests, outlined through a series of talks many of the building problems relevant to their libraries. Helen Crawford, of the University of Wisconsin Medical Library, and Edna Voigt, of the Remington Rand Library Bureau, New York, expressed the need for preliminary planning and the use of a consultant in developing libraries in buildings constructed for nonlibrary purposes. Mrs. Elaine Woodruff, U.S. Civil Service Commission; Alderson Fry, West Virginia University Medical Center Library; Alberta W. Brown, formerly with the Upjohn Company; Clayton S. Childs, Hospital Division, Bureau of the Budget, Washington, D.C.; and Carl Hertensteiner, State Training School, Redwing, Minnesota, discussed also the problems of planning, building, and remodeling libraries within federal office buildings, correctional institutions, business firms, or federal hospitals. The group closed its session with a talk by Donald E. Fearn, of the National Society for Crippled Children and Adults, on the architectural barriers which face the elderly and the handicapped.

Program coordination, registration, and general arrangements were handled by the headquarters staff of the Library Administration Division.



The Library Building Consultant

Five Questions

KEYES METCALF
Library Consultant

This discussion on library building consultants will center upon five questions: (1) Why have a consultant? (2) How do you select him? (3) At what stage in the planning should he be selected? (4) What do you pay him? (5) What should he do?

Why have a consultant?

In spite of the large number of libraries that have been planned and constructed since the war, the average librarian rarely has an opportunity to participate in the planning of more than one building during his career. Until very recent years, comparatively few architects had specialized in library planning. An institution may well appoint a consultant in order to place at the disposal of its planning team knowledge and experience that would not otherwise be available.

The institution may have special planning problems which make a consultant particularly desirable. There may be a trustee who wants what his grandfather wanted, and only a monumental or a Gothic building will satisfy him. There may be a professor with a German background who believes in seminar rooms for his advanced classes, in which the basic collections in his special field are shelved. There may be a science professor who is convinced that no library is going to be needed in the future because of technological developments. The institution that has the over-all responsibility for the building, or its representative, will find that an outsider can provide the needed ballast.

In most cases, however, a consultant is wanted because of the realization that special knowledge is not locally available. Since the cost of a library building is very great—sometimes double the investment in the library—mistakes would be extremely serious. Before the use of a library consultant, which is a development of the last twenty years, libraries were generally planned with the librarian having little to say about the details. Since the architect was primarily interested in the aesthetic side and knew little of library problems, results were not satisfactory functionally.

The chief reasons for a library building consultant, then, are to make available special knowledge of the functional needs and requirements in a library building, and to have an effective voice on its planning problems.

How do you select a consultant?

Experience is a most important consideration. Ralph Ellsworth says never to take a man who has not already had at least three assignments of this kind.[1] This sounds a little like trade unions that do not want to admit young workers. It is easier to demand higher wage rates when there is no competition. Experience is desirable, but how does a new man get his apprenticeship and training? It is important for those of us who are now doing consultation work to bring in younger men to help us so that a new crop will be available in the years ahead. The same rule applies to administrative work of any kind. One of the most important things that a head librarian can do is to train others to take his own or another administrative position.

Yet, it is desirable to select a consultant with experience. Investigate the results of work that he has done elsewhere. Keep in mind his knowledge of building planning, and his ability to influence the people with whom he deals and to make them understand the basic problems involved.

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[1] Ralph Ellsworth, *Planning the College and University Library Building: A Book for Campus Planners and Architects* (Boulder, Colo.: Pruett Pr., 1960), p. 24.

He should have the ability to explain the reasons for his point of view, and to persuade those with whom he works of the importance of carrying out his suggestions. He must be a good salesman who is fearless in expressing his views. He must avoid undue aggressiveness and not be overly dogmatic.

While you cannot expect the consultant to be an architect and an engineer, he must understand their problems well enough to avoid unsuitable and impractical suggestions. He must also keep in mind the present situation and prospective future library developments as well.

The right consultant should be picked for the particular job at hand. A man under consideration for the position may be very suitable for one institution and not for another. The proper qualifications for a good librarian do not necessarily make a good library building consultant. You should not pick a building consultant because he is the successful administrator of a large library. Neither should you do so just because he is in the same city or state. The fact that he may have worked successfully on a public library building does not necessarily mean that he can do the same on a college library, or vice versa. Pick a man who you think has the knowledge, experience, and broad-gauge mind that will enable him to understand your particular problem and to help in the places where you need help. If you need someone to influence the governing board, the library committee, or your administrative officers, rather than a person to help with the details of the building planning, pick someone who you believe can do this job.

At what stage should the consultant be selected?

If you are going to have a consultant, select him just as soon as possible. He can be of use in deciding whether you should erect a new building or add to an old one. He can help select the site. He can properly give advice in connection with the selection of an architect. While he will not be in a position specifically to recommend the firm to be selected, he can offer suggestions for the qualifications of the man to be chosen. He may be able to prevent various mistakes if he is appointed before important decisions have been made which it will be impossible, embarrassing, or expensive to change. This does not mean that it is unwise to have a consultant unless he is chosen at the beginning. A situation may often develop which makes the appointment imperative and better late than never.

What do you pay the consultant?

There is no accepted schedule of payments for library consultants as there is for architects. The latter are almost always employed on a percentage basis, the percentage varying with the type of building and its location. Library building consultants are not in an organized and accepted profession as yet and may never be. Yet, they may properly consider themselves to be like physicians, who adapt their charges to the patient with whom they deal.

There are three fairly definite methods used in charging. One is a percentage basis, the percentage varying according to what is expected of the consultant. Is he to follow the procedures through from beginning to end, as the architect does, supervising the construction as well as making the preliminary plans, the working drawings, and the specifications? Or will his assignment be completed when working drawings are authorized? The answer makes a difference in the percentage.

The second method is an agreement by which the work will be done for a definite sum. Ralph Ellsworth very modestly suggests that for a $1,500,000 college library one tenth of 1 percent, or $1,500, might be budgeted for the consultant.

The third method is for the consultant simply to say that his charges will be so much a day plus expenses. The per diem rate may vary from $50 up, according to the experience of the consultant and the job at hand. As an illustration, a small college library or a branch library costing $200,000 might need a consultant. A tenth of 1 percent of the total, or $200, would not be adequate, but $150-$200 a day would be too much if too many days were involved. On the other hand, a man with a great deal of experience might feel that in a situation where there could be complications, $200 or more a day would not be unreasonable. Also, a team of consultants, working together and contributing between them expert knowledge in various fields, might require altogether a larger percentage of the total cost but perhaps less per day per person.

Consultant work is not sufficiently well organized or established at present for us to say that a definite scale for any of these methods can or should be proposed. Some consultants do a great deal without any charge except for expenses, particularly with institutions in which they are interested.

There are two definite suggestions in connection with charges. The institution should not base its selection primarily on the cost, but on the person that it wants. The consultant should not try to bargain and charge as much as traffic will bear, but should set his rate for the particular job and let the institution accept or decline.

What should the consultant do?

The consultant should do everything that he can to bring about a better building. He should make available his knowledge and experience to those concerned, moving ahead when necessary and holding back temporarily or permanently, if he believes that someone else's voice on a particular point at a particular time can be more valuable. He should defer to the specialist in the field for which he is not qualified, although if he has a definite opinion based on good authority, he should state his case as quietly and persuasively as he can.

To be more specific, if the consultant is hired at the very beginning, as his first task he should go over the whole situation in general terms. This means that he must learn enough about the institution, its history and background, and its objectives so that the framework of the library's requirements becomes reasonably clear. Then these requirements should be translated into approximate square footage.

A consultant may have basic formulas for use in this way. Different formulas are required for different types of institutions. In a small academic library ten to twelve volumes can be shelved in 1 square foot of gross floor space. In a larger library up to fifteen may be a safe figure. Fifty square feet or a little more will accommodate a reader. This 50 square feet will provide not only space for the reading room but also space for the staff to serve the readers, the processing work space, and the architectural space as well. The two added together—the space for books and readers, and that for services to readers—will give the gross square feet if no unusual special facilities are required. Features such as an auditorium, audio-visual areas, an exhibition room beyond normal lobby space, classrooms, more than a limited number of seminars or faculty studies, and special lounges are extras and must be added to the previous figure.

Other important factors to be kept in mind are the special features that the institution wants to incorporate, such as all-night study areas, open or closed stack access, seminars and studies, smoking rooms, lounges, exit controls, auditoriums, exhibition areas, and the like.

With an approximate total of space requirements available, the present building should be carefully investigated, the consultant asking himself whether, with rearrangements, the space required could be provided for a few years more within that building, or a wing could be added without leaving the building in an undesirable position aesthetically or functionally. The possibility and advisability of an addition should always be considered so that no interested person can say that such a plan has been left out of consideration. It is necessary at this stage to decide for how many years in the future the plans are to be made, since it is not only the present but the future requirements which are of interest.

After the decision has been reached as to the total space requirements, the site problem should be settled. Do not permit this decision to become definite until you know what is needed, and can be assured that a building of the size required can be placed on the plot selected. Also, if the long view is to be taken, thought must be given to the next stage when the new building will outgrow its space.

The next step is to return to the program and complete it for the architect. It should provide, if not the exact size of each area, an indication of the required size in terms of readers, staff, and collections to be housed and the desired spatial relationships between the different areas.

The program should be written locally by the librarian or his building committee. It is almost impossible for an outsider to obtain the required information in a short time. The consultant can, however—and generally should—take a leading part in the program writing, primarily by asking questions that should be answered and by seeing that important points are not omitted. In other words, he should be the guide and critic rather than the author. If the program is written by those who have to live with the results, it should be more satisfactory. The building committee and the librarian will understand the program better if they have written it, and will then be able to explain it more successfully to the faculty, students, the governing boards, and the public in general.

Help in selecting the architect after or before the program has been completed can, in many cases, be provided by the consultant. The consultant generally confines himself to suggestions on the type and the characteristics of the architect to be selected, rather than to the recommendation of a particular architect.

The consultant or the institution should ordinarily not prepare schematic drawings or preliminary sketches for the architect beyond those which indicate desired spatial relationships. It is important, however, for the consultant to see and discuss with those concerned the drawings that the architect makes, particularly those that have to do with spatial relationships and function. Comment should be made by the consultant on the adequacy of the space assignments proposed and whether they fulfill the program requirements. He certainly should be involved with equipment layouts and traffic patterns, floor loads, floor coverings, lighting, acoustic problems, ventilation, and related problems. All of the architect's proposals should be studied. Furniture design, particularly sizes, are within his province, and, to a limited extent, color and finish.

During the planning stage, if the architects and other members of the planning team visit various libraries to learn how and how not to solve planning problems, this can often be done under the sponsorship and direction of the consultant, who can suggest libraries to be visited and points to be kept in mind during the visits. Finally, the consultant should be available by telephone and by letter as questions and problems arise throughout the working drawing stage and during construction as well, even if he does not appear on the scene himself.

The Consultant— A Panel Discussion

Moderator: Ralph Ulveling, Director, Detroit Public Library, Detroit, Michigan

Panel Members: Robert H. Rohlf, Director, Illinois Library Association, Public Library Development Project, Aurora, Illinois

Charles Mohrhardt, Associate Director, Detroit Public Library, Detroit, Michigan

Robert Muller, Associate Director, University of Michigan Library, Ann Arbor, Michigan

Donald Thompson, Librarian, Wabash College Library, Crawfordsville, Indiana

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MR. ROHLF: The consultant not only represents the library but he has to represent a particular side of the architect. Too often librarians have absolutely no comprehension of the problems which confront an architect. Sometimes a consultant ends up in the same situation as the architect does. Once construction begins, he is an arbitrator between the architect and the librarian, whereas the architect is more or less the arbitrator between the owner and the contractor.

When you are seeking a consultant, in addition to his qualifications for his specialty, select one with whom you can get along. If you cannot establish a rapport with your consultant in the sense that you disagree easily, then you will have a building project which becomes rather strained toward its conclusion. Pick a consultant whose time schedule will fit yours. All of them are busy, but it is best not to fit your schedule to his; rather let his schedule fit yours.

Many times the term "consultant" is used to mean both "critic" and "consultant." The consultant is the one who works on the project from beginning to end. The term "critic" designates somebody called in for just one part of that project. Often the consultant is presented with an established fact and he is supposed to do something about it. He is presented with something that is ill-advised, but there is nothing he can do about it except to say that it is ill-advised.

A consultant offers one great advantage in that he speaks, or at least understands, the language of both the librarian and the architect. The problem of communication is really the greatest problem in any building project. All of us use the same words, but often with completely different meanings. This is not realized until what was said to the architect orally or in writing is translated into a plan in a completely different way.

A consultant has a double obligation of protection. First, he has to protect the community or the library from an overdesigned and nonfunctional building. Since public libraries usually are built only once in any architect's lifetime in a city, the architect has a tendency to look upon his commission as a prestige assignment. Also, it is the consultant's job to protect the architect and the library board from a one-man library, from a library which can function only under the administration of one librarian in the future. The real goal of the consultant is to produce a functional building, which is not only aesthetically attractive but also one which the community can afford to maintain in the future.

MR. ULVELING: There is often a situation where the librarian says, "I want my office here so that I can do so and so." You then say to him or her that this is not a good practice, that it should be next to something else where she can do certain other things. Yet, she still wants her office here. She is the owner and, therefore, it is hard for any outside person to come in and dictate. You can attempt to persuade, but if you do not persuade, you are going to have to take it and like it.

Question: When the library board looks to the librarian, who is really the specialist, it feels that over these many years she ought to be able to project into that building program the character and the needs of the community. It has been emphasized here that there are particular problems in a particular community of which only those people in that community are most aware. What about this problem as to the projection of the librarian into the contest with the consultant?

MR. MOHRHARDT: When we talk to our clients, we point out that they should be thinking about organizing on a completely different basis in the larger building than the one they were operating on in the smaller building. One of the most difficult things to realize is that the new building is going to be very much larger, the space is going to be greater, and the distances for trucking books and so on are going to be greater.

The time to make any organizational changes is long before you get into the new building. For example, on the loan services, changing to a transaction system automatically reduces requirements for large control. If, however, this change is not made prior to moving into the new building, then you have a tremendous desk, but what are you going to do with it?

Placement of the librarian's office should also be considered well in advance. In our own experience there was a case where the librarian wished to have her office adjoining the reference area, with a glass wall so that she could be librarian and reference librarian. This was possible in the old building, where the space was elbow to elbow and there was not a great distance to travel. But in the new building, we had to face the fact that there was going to be a larger staff. Much more service was to be given to the public, and there would be many more problems and patrons.

Each member of the library staff should attempt to project himself into the new situation and solve the problems before he moves into it. He should question every routine that he is following as to whether or not he could do it in a better way. He should question whether it is economically sound to do it this way, or whether it would be better to do it some other way.

MR. MULLER: If the librarian intends to transpose the old pattern into the new building but then finds it does not turn out right, what is the responsibility of the consultant? Should he at this point introduce some disturbing ideas? Maybe we ought to think in terms of a different pattern. Maybe some other libraries have tried new patterns, which seem to work well. How can we get this element of novelty into a detailed scheme?

MR. ROHLF: Recently I asked a librarian to write down very roughly her ideas as to how the processing should work in a new building. She came up with an absolute carbon copy of what was being done in the old building. As a result, she had a vast array of materials going back and forth and around because, after all, this is what the staff were used to doing in the old building.

MR. ESTERQUEST: Planning a building, to the librarian who knows what he or she is doing, should provide the necessary stimulus to a very careful analysis of what the functions of the library are and what systems are going to be used. We have often listened to talks by librarians in which the librarians had all the answers. Yet, is it possible that the architect could bring in fresh ideas and stimulate us to some new thinking about our functions?

For example, there is the individual who indicates she does not need a workroom because she sits down at the reference desk. In this case a consultant ought to put his finger on the problem and say, "Look here, that may be the way you do it now; you may have been living with this process for the last five years. However, your successor will condemn you for the next twenty-five years for freezing into this new structure something which is simply a working habit of your own." The consultant and the architect could play a very important role in pointing out to the librarian that he should think not only of himself but of his successor.

MR. CERNY: A doctor generally sits on a hospital board and he, likewise, is the worst possible person to discuss a hospital plan. As an architect, I feel that the people who run back and forth all day long in a building are the ones who know about that building. The janitor also knows about a building and its problems. Therefore, a good architect should visit buildings, research and study them, and listen. It should not take him long, because he does this all the time, to spot the negative qualities or negative points of view of the transferal of working operations to a larger scale.

There should not be any conflict, but when there is, the consultant is eminently the best man to resolve it, because the moment a conflict occurs between the librarian and the board, then the architect's motives are questioned. Further, the consultant speaks with authority, and the consultant and the architect become firm allies, both being assumed competent, of course.

Question: Where does this fourth person fit in whom none of you have named? You have mentioned the librarian, you have mentioned the consultant, you have mentioned the architect. What about the business manager? How does the librarian deal with the business manager who is on the spot? After all, the consultant and architect may be two thousand miles away and very busy men.

MR. MOHRHARDT: We have much the same problem, not only with the business manager but with the city manager, the mayor, or whoever else is involved in planning. Our solution is to get everyone together, and then place the facts on the table and fight for the things which we believe are right. Sometimes an architect who is out of town attempts to settle many of these questions by telephone. This simply cannot be done.

MR. ULVELING: In the last analysis it is a matter of persuasion. A strong business manager, strong librarian, or strong architect are strong because they are persuasive.

MR. COLBURN: No librarian can proceed with planning unless he or she deliberately travels throughout the country—the United States and Canada—and studies new buildings that have been constructed in the past ten years. Ask the directors what they like and dislike about their present quarters. This is a valuable learning lesson.

In addition, take your architect to these buildings when possible, or tell him what has been done, where a given building is fulfilling its function, or where it falls down, and then ask him how he would resolve the problem in connection with your new building. It is helpful to gather a great many drawings from the American Library Association headquarters as well as from the library literature and go over these drawings with him, pointing out how a previous architect attempted to resolve a function which the librarian wanted the building to achieve.

Comment: For perhaps a decade or more there will be a shortage of professional people, and in designing the building this factor should be taken into consideration. Thus, it is better to build a rectangular building, where the librarian has control of the entire floor, than an L-shaped building, where he can see only one lane.

MR. STANFORD: I wanted to raise a question about the open arrangements of buildings as opposed to the traditional stacks. We have all been moving, in recent years, toward more access to books, more materials in the open, both in colleges and universities and also in public libraries. Therefore, the question I want to pose is this: Whether there is a size factor beyond which this kind of design becomes economically unfeasible?

Inasmuch as we are in the process of building a major structure, I did a little calculation and figured that if we interspersed books and readers in the way the planners have done at Purdue, we probably would come up with a fourteen- or fifteen-story building, which, of course, would be economically prohibitive. Isn't there some point in size where you arrive at what is economically unfeasible?

MR. METCALF: There is no definite answer to that question. Princeton University has felt that it could turn its whole student body of several thousand students loose in a stack with 2,000,000 volumes. At Harvard we found that after we passed 2,000,000 volumes, to turn a large undergraduate student body loose in the bookstack was hard on the undergraduate. He could not find what he wanted. Therefore, we started an undergraduate library.

On the other hand, I think it is perfectly possible to mix your books and readers up together without taking any more space. Of course, you lose control of them and you do not supervise them. However, if you can check the patrons as they leave, then you are just as well off as you were before.

We must get away from the very large reading areas, such as the New York Public Library reading room with 768 seats. Our students today want at least a semiprivate accommodation, and the way to give it to them is to mix the books and the readers. We found that this was a good method of doing so without, at the same time, being extravagant with regard to the space and its utilization.

MR. ULVELING: Is there any way you can tell whether to build an addition or to scrap what you have and begin again? This is a very serious question in many libraries, and certainly many business directors raise it.

MR. MULLER: Isn't this a question largely of available funds? Our building is forty years old. To build a new library would cost about $15,000,000. Yet the most we can ask for would be $4,000,000. In the university situation there very often seems to be a sort of traditional limit placed on the amount a single building project can cost, and, as a result, many times there is a great misuse of lands resulting from this unfortunate conception.

Comment: The present library may very easily be adapted to another building for which there are funds available, and this would be one of the means of solving the problem. I have seen one library adapted to a very fine administration building, another one to an art institute.

MR. STANFORD: It seems oversimplified to answer the previous question in terms of dollars. Is the present building still usable and functional? Does it lend itself to the addition? Do you have space around it that can properly be used for an addition? Is its location in the proper traffic flow in relation to the other buildings and other services that need to use it? These are some compelling questions which need to be considered in addition to the obvious one of dollars.

MR. ULVELING: In other words, regardless of the inclination about spending money, you are throwing good money after bad if you try to add something to an already bad conception which has been getting worse.

MR. THOMPSON: We have heard a great deal in recent years about the college library being perhaps big enough when it has 100,000, 200,000, or 250,000 volumes. In other words, it can throw away books it does not need, whereas, in a university, you must keep most books you get. If this is the case, and if the old building is small in terms of total capacity, then perhaps the addition to it might, in a sense, take nearly as much money as the building of a whole new structure. If a new building will cost only half again as much or thereabouts, then perhaps it is a better solution than putting an addition onto an older building.

Question: In connection with the consultant, there have been three major people mentioned: the librarian, the architect, and the business manager. I can conceive of the consultant doing a major job of improving relations between the librarian and his own staff. What experience is there in that connection?

MR. MOHRHARDT: Insofar as I am concerned, when we speak of the librarian, we likewise mean his staff. It is true that many hours of the consultant's time go into the resolving of problems between the staff and the administration. A practical example of this is the controversy as to whether children's books are so much different that they cannot be charged out and returned at the same desk as the adult books. You will find there are many children's librarians who feel very strongly that this has to be done, and others who feel just as strongly that it should not be done.

We think that all these routine processing types of work should be done by the lowest-paid members of the staff—the clerical staff. There is nothing unusual, in our opinion, about children's books which makes it necessary for professional librarians to charge them out or to supervise their charging out. We feel strongly that the children's librarian should be on the floor visiting the child who is selecting a book, and not standing at a desk saying that this book is too old for him and this is not suitable for him. We want a staff and a building that will operate with professional people doing the professional task they are trained to do and not clerical work 80 percent of the time.

Question: The fact has been mentioned that one should bring the consultant in as early as possible. What time can we figure in our budgets in building up to a building program? What do you mean when you say as soon as possible?

MR. ULVELING: You should hire a consultant early enough to help you frame your program. Obviously, to do this, your consultant should be the first person selected, long before you call in the architect. This can be done a year or two years before. You can do this whenever you become serious about a building. Certainly, you should not bring in the architect first, have him draw something up, set up a group of blueprints, and then send them to somebody to review. At that time it is too late.

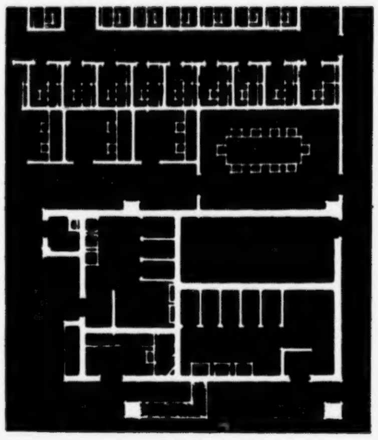
MR. MOHRHARDT: Earlier Mr. Metcalf quoted Ellsworth and gave a figure, on a $1,500,000 building, of one tenth of 1 percent. Frankly, in the public library field, it would be about ten times that amount. One should not be misled into feeling that a good consultant, who is capable of making scale schematic drawings and follows through on the program completely, can ever be obtained for that amount of money. We feel, in connection with our own work, that we have saved the library more than our fee in the first years of the building's operations with regard to staff and operational costs.

In many cases we have been retained by the library board itself, and in other cases we have been retained and paid by the architect. The latter usually has felt that we have saved him two to six months' time in the development of the project because we, as a liaison person between the architect, the board, the librarian, the staff, and others concerned can resolve many of the problems which it would be difficult for him, notwithstanding all his research, even to be able to determine. This is because many of the factors involved are philosophical in relation to how a library is to operate, where it is going to go, and so on.

MR. ULVELING: In connection with fees nobody has mentioned whether there should be a difference between a fee for a new building and that for an addition. You work just about ten times as hard on an addition—in attempting to remake an old plan into something functional—than if you started with a clean piece of land. Therefore, I think the fee schedule, just as in architecture, should be different.

Question: What suggestions does the panel make as to the building committee and the relationship of the consultant to the members of the building committee?

MR. THOMPSON: The building committee should generally include a good cross section of the whole campus. It ought to include faculty members, perhaps the business manager, the superintendent of buildings and grounds—at least on some basis—as well as perhaps the dean of the college and certainly the librarian, who will speak for the staff. In some cases even the board of trustees is represented.



College and University Libraries

Francis A. Countway Library of Medicine

Harvard Medical School
Boston, Massachusetts

STATISTICAL DATA

Architect: Hugh Stubbins & Associates
Cambridge, Massachusetts
Type of library: Medical library
Population to be served: 750
Area: 153,600 square feet
Book capacity: 750,000 volumes
Seating capacity: 720
Cost: $5,310,000
Building: $4,750,000
Equipment: $560,000
Cost per square foot: $30.92 (construction cost)

PRESENTATION OF PLANS

Librarian: Ralph T. Esterquest
Architect: Peter Woytuk, of Hugh Stubbins & Associates
Critic: Alderson Fry, Medical Librarian, West Virginia University, Morgantown, West Virginia
Rebuttal to Critic: Robert Cerny, Cerny and Associates, Minneapolis, Minnesota

RALPH T. ESTERQUEST

The Francis A. Countway Library of Medicine, when completed two years from now, will house the combined collections of the Boston Medical Library and the library which now serves the Harvard Medical School, the School of Public Health, and the School of Dental Medicine. In point of size it will be the largest medical library in the world associated with a medical school. It will be second in size only to the National Library of Medicine in Bethesda, Maryland, which occupied its new building within the past two years.

The Harvard Medical School Library has not always been large. Although the records indicate it was founded in 1764, for nearly a century it was simply a handful of books serving teachers who lectured in medicine at Harvard College. About the time of the Civil War a separate medical faculty was created, and, somewhat after that, the medical faculty separated itself geographically and moved from Cambridge into Boston.

Over the years, the Medical School occupied a number of locations in Boston. In 1905 the present quadrangle of five buildings was erected—imposing, monumental buildings of white marble. This marble, incidentally, was the rejected stone of the New York Public Library, bought up at a bargain price. The five buildings had separate departmental libraries, and this was the pattern for many years. There was no general library for the Medical School until 1928, when some of the departmental libraries were brought together and formed what is now the consolidated Harvard Medical Library. As time went on, the improvised space proved to be less and less adequate.

One reason the library did not become large in size—as, for instance, did the Law Library at Harvard—was because about a mile away in Boston was located the Boston Medical Library, a proprietary subscription library, established in 1875 by a group of local physicians. This library enjoyed prosperity for two generations, with support from the general medical profession in the community. However, during the last generation, research around the country has become concentrated more and more in the medical schools, and the opportunity for support

Francis A. Countway Library of Medicine
Architect's model

Hugh Stubbins & Associates, Architects

has been diminishing for medical society libraries generally as well as for private medical libraries. During recent years there has arisen some uncertainty as to the future of the Boston Medical Library, even though it possesses a rich collection of research materials, both modern and historical.

Ten years ago the Medical School at Harvard determined to improve substantially the quality of its library and to construct a new building to house it. Five years ago a gift of $3,500,000 was used to establish a building fund, and it was determined to proceed with building plans.

Building program

A rather detailed building program was written. It ran to seventy pages and was widely distributed, not only in the Harvard medical community but elsewhere in Boston. Upon studying it, the officers of the Boston Medical Library decided that the time was right to consider the merger of the two libraries, a possibility which had been discussed from time to time in the past. Now the historic moment was at hand. Negotiations were carried out successfully, and three years ago an agreement to combine the two libraries was signed.

The plan contemplates bringing together in a new building, at the Medical School, the collections, the services, and the staffs of the two libraries. When reorganization has taken place, books will be intershelved, and the catalog and other records will be interfiled. It is intended that it will function as a single library. Some features will emphasize service to students; others, the needs of the practicing physician.

After the agreement to merge, the building program was largely rewritten. Significant help was achieved through another broad distribution of the program in the community. A final version was ready in September of 1961, when an architect was selected.

Selecting an architect

One word about the selection of our architect, because I think this is very important. Ours was the rare opportunity in the university-college field when the librarian was given every encouragement to look the field over and to select the architect who seemed to him to be best suited for the purpose. I had the pleasure, therefore, of meeting and talking with many of the first-rate architects in the country. We developed a list of basic criteria on which the selection of an architect was based.

One important qualification was that the architect should never have planned a library. Our feeling was that this kind of an architect could bring to the design fresh ideas. We were immodest enough to think that we had among ourselves, and among those who consulted with us, enough competence properly to educate the architect and keep him on the track. This confidence has been borne out.

We ultimately selected Hugh Stubbins and Associates, near at hand in Cambridge. We are fortunate in having an architect with whom we can consult at a moment's notice. Another of the criteria was the ability to communicate. Is the architect a person who can and will listen and understand what you are trying to say, and translate what you request into function and then into design? The twenty-two months that we have been working with Mr. Stubbins and his staff have served to demonstrate that we chose wisely. It has been an effective partnership.

Among other considerations we felt we had an obligation to turn out a building that was more than just functional. We assumed it would function, but we believed that it should be a distinguished building as well—one of which we could be proud. The artistry of Stubbins and Associates has thus far indicated we will be getting a building that is not just a working library, but one that will be most pleasant to view.

The site presented a number of small problems. It is in a crowded urban area. Alternative sites were examined, but none were ideal. Finally, it was decided that the library should be built at a point previously occupied by the nurses' residence of one of the teaching hospitals. Unfortunately this building had to come down. The site turns out to be a good one in being quite close to the majority of potential readers.

In connection with the user community, we are concerned with a group which is homogeneous, in that it comprises mature people working in medicine and related fields, and heterogeneous, in that it ranges from students, beginning medical school, to a large number of research people. In round numbers, our clientele consists of about 750 students in medicine, dentistry, and public health, and 500 full-time and 1,200 part-time faculty. This is a case where the faculty outnumbers the students by about two to one. There are also the practicing physicians in the community, who will use the library largely by virtue of the commitment of the Boston Medical Library, which is continuing its service to that group.

Building data

I would now like to present data on the building itself. In gross size it is 153,000 square feet. The price tag at the moment for construction (and this is an estimate plus or minus 5 percent) is $4,750,000. The cost runs to about $31 a square foot for construction. There is a 750,000-volume working capacity for books. Readers are figured at 720. It is an air-conditioned building.

The general design stresses function, and it is not unlike many recent library buildings. But in some respects we have made bold departures. For instance, the building has an interior central court. This was rather a shocking idea for me at first—waste space and all that. But as I have come to study it, I have seen its virtues. I see advantages that far outweigh any disadvantages.

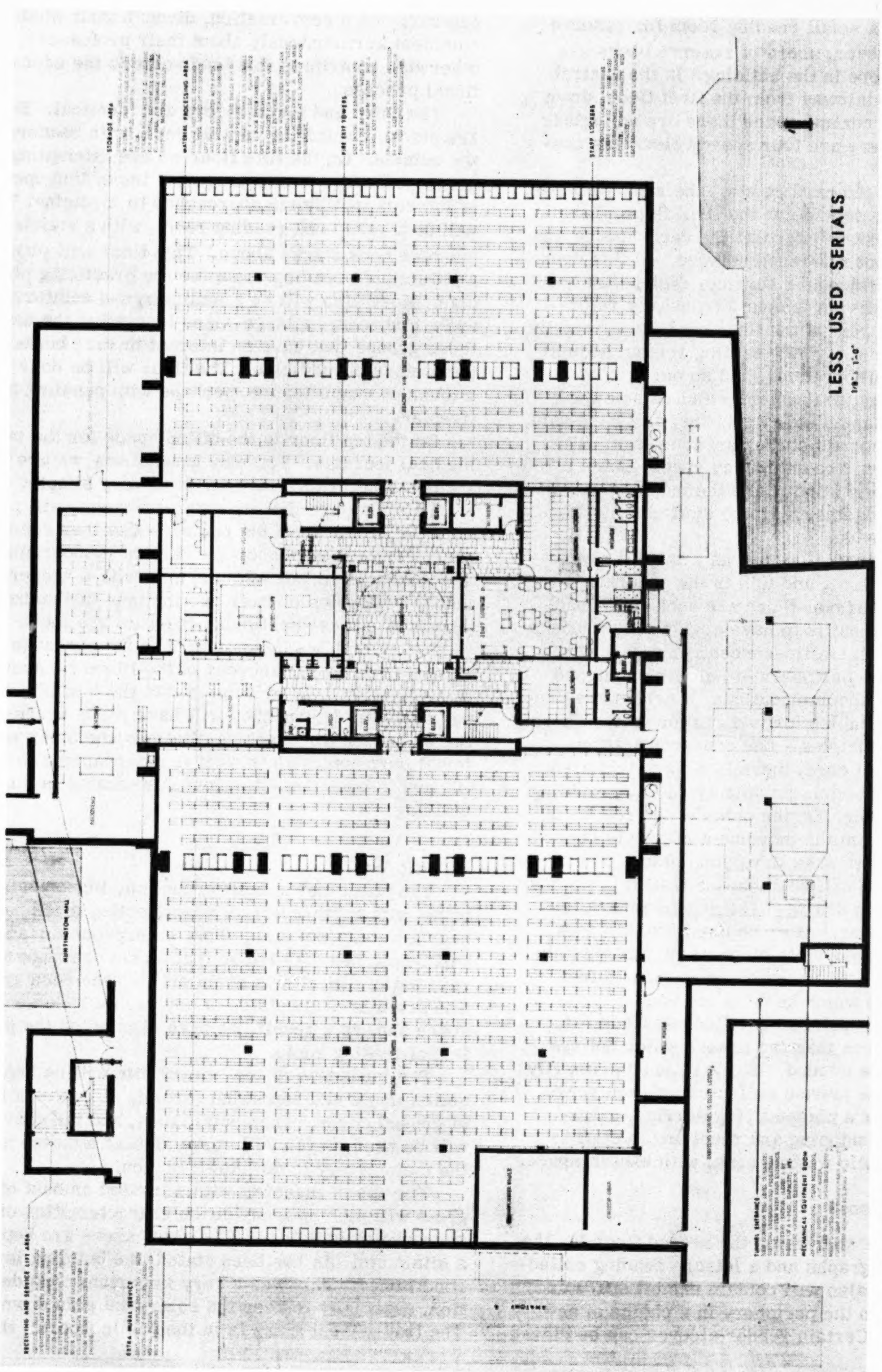
Because the site was not large, we could not contemplate a horizontal building. At first, I felt that a vertical building was not desirable, and that a properly planned library should display for the user, at the ground floor, the major materials and services: books, periodicals, and staff. My dream, I suppose, before we had these designs, was based on the Cornell Library at Ithaca—to have all of the most-used functions on the ground floor. However, as we began to look at the number of square feet that these activities and operations would consume, it became obvious that such a scheme would be unrealistic. Therefore, we took these materials and functions and put them one above the other in a vertical plan. The actual distance for readers to travel, getting to the materials, turns out to be a great deal less than if they were traveling on the horizontal in an area that might become as large as a football field.

There are two floors below grade and five above the ground. Being a medical library, the building makes a sharp dichotomy between books and journals. The reader who wants to consult journals goes down; to get books, he goes up. On the floor directly below grade are the most-used journals—those of the last ten years. The floor on the bottom houses journals eleven years old and older. The ten-year split is easy to remember, and in medicine it represents a reasonable point at which one can distinguish between the more-used and the much-less-used journals. The same arrangement applies to the books. The last ten years are on the second floor, and the books that are eleven years or older are on the third and fourth floors. On the fifth is the history of medicine suite, with related functions, and on the top floor rented space is provided for the editorial offices of two important medical journals published in Boston.

The entrance floor is primarily a floor which people enter in order to go elsewhere. However, on that floor we do have the card catalog, the circulation service, reserve books, reference service, and related reader services. Although there are two floors below the entrance level, thanks to an attractive sunken plaza, the first one down has the benefit of natural light. The lowest level is entirely underground. It is primarily devoted to the housing of the older periodical files, the photocopy and extramural services, and the shipping room.

First floor

On the first floor the reserve book service is designed for flexibility; by the locking of one door, the unlocking of another, and the putting up of a different sign, the area can be quickly changed from a closed


LESS USED SERIALS
1
HUNTINGTON HALL

Hugh Stubbins & Associates, Architects

Francis A. Countway Library of Medicine
Floor two levels down

reserve system to an open reserve system, or vice versa. There is a small reading room for reserve book users. However, users of reserve books are free to sit anywhere in the building. In the central court there is a stairway from the first floor, down one floor. In the central space there are no further stairways, but there are four speedy elevators centrally located.

In addition to the card catalog, the reserve books, and the reference service on the first floor, there is also a service desk to interpret the card catalog and to give on-the-spot reference service. At this desk there is to be no telephone service. Telephone and mail reference service is done in a nearby reference office. The rest of the floor consists primarily of work space for the staff: catalog rooms, acquisitions, administrative offices, and so on.

Down one level, to the floor which is below ground but still has outside light, are, as I have said, the most-used journals of the past ten years. The most recent issues are on display racks—some 2,700 titles. Immediately at hand are the indexing and abstracting tools, together with the staff activity for interpreting their use.

Readers are seated in alcoves around the outside wall of this floor, and this is the general plan on all floors. Wherever there are books and readers, the arrangement is to have a wide ring of books around the central, traffic-concentrated core with readers out on the periphery—in alcoves equipped with a variety of accommodations. Carrels are provided, as well as tables for two and for four. There are two basic principles – one concerns traffic. Around the central core, there is always this area of shelves, or materials on display racks, providing an acoustical buffer. On the outside, the reader is isolated—away from the movement of people coming and going. Readers pass in various places and directions, so there will be no major traffic lanes near where readers are sitting. The second principle concerns the reader. After he has found his book, he will have a comfortable place to sit immediately at hand. A chair will never be more than 23 feet from the shelf on which he finds his book.

A rectangular underground floor spreads out over a greater area than the square which defines the building above ground. It will be used primarily as storage for the journal collection, eleven years old and older, for a photocopying service, extramural services, shipping and receiving, a staff lounge, and a public waiting area, with exhibit space.

Second to fifth floors

There will be shelves on the second floor for the most-used monographs and a leisure reading collection. This floor also will contain exhibit space and, again, readers on the periphery in a choice of accommodations. Certain reader alcoves can be closed off. They are acoustically treated so that students can carry on a conversation, discuss their studies, comment acrimoniously about their professors, and otherwise contribute in a loud voice to the educational process.

The third and fourth floors are identical. Here are stacks around the central core, with readers on the outside. On the fifth floor we are attempting to create a facility to encourage the impending upsurge of interest in historic approaches to medicine. There will be a rare book reading room, with a stairway to the rare book stacks above. This floor will provide a physician's reading room for the practicing physician. Here also will be a multipurpose auditorium and a clubroom—a large-sized lounge for the use of those groups that have an interest in rare books and the history of medicine. The floor will be done with a touch of magnificence, perhaps with paneling and a fireplace.

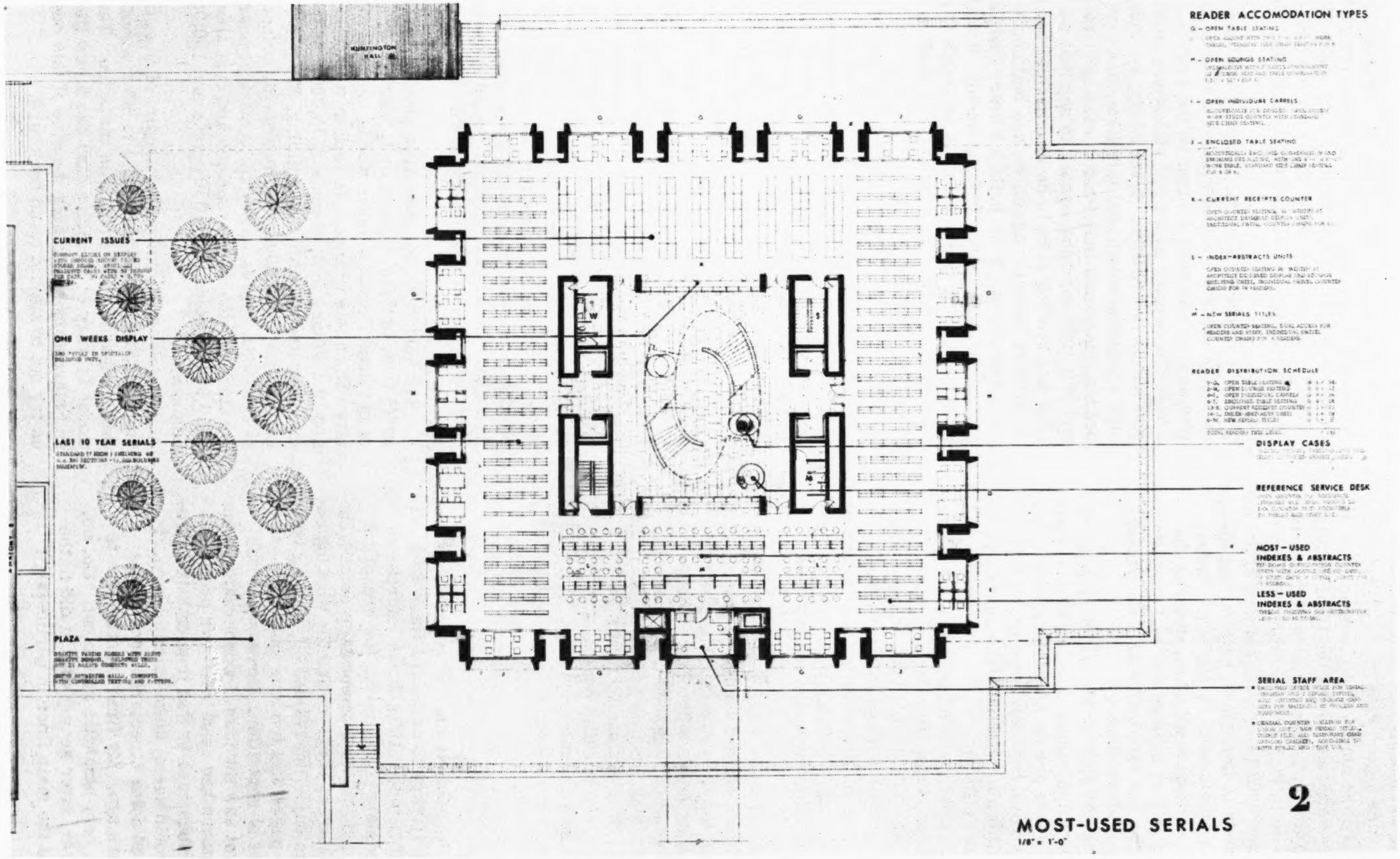
On the top floor is the office space for the two medical journals. You may wonder why we are having this nonlibrary function. It is very simple. The journals, as part of their rent agreement, will provide the library with the review books they receive, practically all the important current monographs and textbooks in English, and also with a "generous" number of copies of their publications for exchange purposes. These particular journals are much wanted abroad; we look forward to the exchange copies as an important part of the library's acquisitions program. In addition to this the journals will pay rent. In return, they will have ready access to the collection for checking citations and other editorial purposes. We think it is an advantage to the library to have these two journals located in the building.

PETER WOYTUK

The plaza that is built around the library will be paved with earth-colored, nonreflecting brick pavers over a waterproof slab. This waterproof surface will be pitched outward so that storm drainage and rain water will always drain out into the open area. The drain is thus outside of any usable basement space and, as a result, we have eliminated the problem of leaking roofs.

The landscape of the library site will be kept quite simple and somewhat formal. A combination of ground cover, ornamental trees, and tall groves will be used, which will serve also as a buffer along the main artery to downtown Boston.

The use of masonry with a limited amount of glass will pick up many of the characteristics of the surrounding buildings. The glass areas are kept to a minimum. As has been stated, the building is air-conditioned. This was a very important consideration, especially to keep the solar heat gain down. The transparent glass is in the public floors: the


READER ACCOMODATION TYPES
G – OPEN TABLE SEATING
H – OPEN LOUNGE SEATING
I – OPEN INDIVIDUAL CARRELS
J – ENCLOSED TABLE SEATING
K – CURRENT RECEIPTS COUNTER
L – INDEX–ABSTRACTS UNITS
M – NEW SERIALS TITLES
READER DISTRIBUTION SCHEDULE
DISPLAY CASES
REFERENCE SERVICE DESK
MOST – USED INDEXES & ABSTRACTS
LESS – USED INDEXES & ABSTRACTS
SERIAL STAFF AREA
CURRENT ISSUES
ONE WEEKS DISPLAY
LAST 10 YEAR SERIALS
PLAZA
HUNTINGTON HALL
2
MOST-USED SERIALS
1/8" = 1'-0"

Hugh Stubbins & Associates, Architects

Francis A. Countway Library of Medicine
Floor one level down

main entrance and the history of medicine. Both of these floors will have a good view.

The building will be clad with limestone in varying textures. The section between the floor panels will have a rough finish, producing a vertical marking which will be quite rich after a time. The metal parts of the building will be bronze-colored aluminum.

The rooftop view is important; neighboring classroom buildings are planned to be high-rise towers surrounding the courtway and looking down on the roof. We made an effort to integrate and simplify the roof projections and eliminated all exposed mechanical equipment above the roof.

The building is 140 feet square. It is laid out on a 24-foot module, which seems to be an efficient one for bookstacks. There are no interior columns. The structure extends from the interior split core to the exterior. This allows for column-free space which is very flexible and efficient.

The lighting in the typical stack space is arranged in concentric rings, with the bookstacks going perpendicular to it, so that book space can be varied and made flexible without loss of lighting quality. The alcoves, on the other hand, are handled with a luminous ceiling, which again allows complete flexibility in subdividing the space now and in the future.

The periodicals floor is 4 1/2 feet below the plaza surface outside, and we wanted to provide an airy, fresh feeling for the readers. Therefore, we increased the ceiling height with covered beam structures and combined luminous ceiling panels.

The leisure reading room is an extension of the central open well. It is defined by furniture and walls at each end. The parallel beams of lighting continue over the space uninterruptedly. This will allow the room to be relocated, changed in size, or whatever it is desirable to do to it in the future.

ALDERSON FRY

When I read the preliminary edition of the program for the new library to serve the Harvard Medical Center, dated October, 1958, I was impressed with the many sensible points made, the breadth of the description, and the close attention to detail. The revised edition (March, 1961), called the working edition, gave me the same impression. I thought, however, that ninety pages was too long and that there was a fair amount of repetition. However, it was good. When I first saw the plan, I wondered, in some cases, if the planners had read their own program.

The most obvious case is that tremendous vault—75 feet high, it would seem, from bottom to top. I thought we stopped doing structures such as that forty or fifty years ago. My first reaction was to dismiss it with a very emphatic statement, "Oh, no, not that." However, after seeing what it did to the whole library and the main floor in particular, I could not avoid further comment.

"Here was murder, most foul, strange, and unnatural!" Here was an overgrown chimney that constantly would burn space. It is most difficult to imagine how it got there. It seems it would have been expressly forbidden by the program, which said:

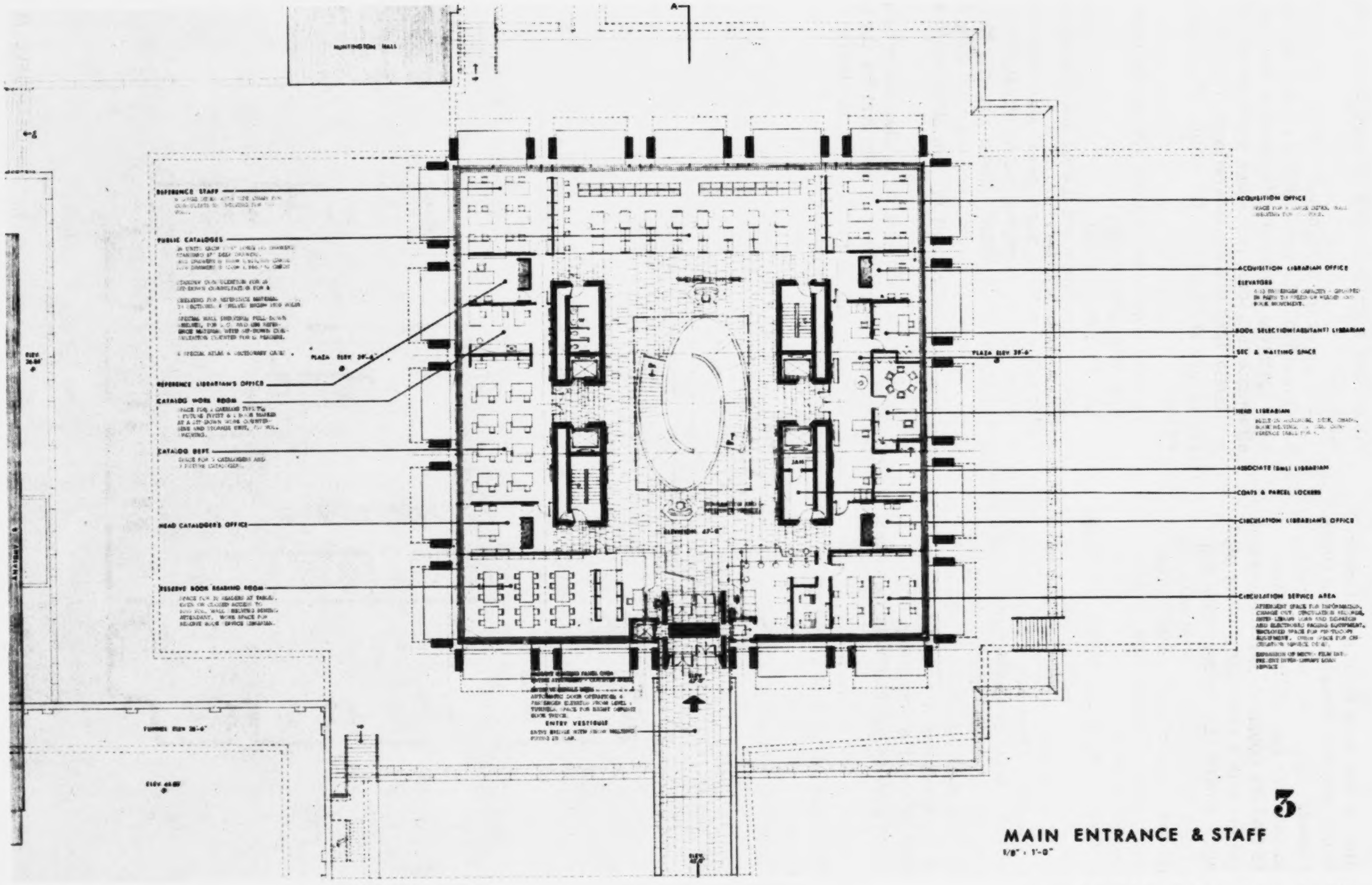
"The Harvard Medical Library must not be the victim of anyone's wish to create a tourist attraction or a monument. It must be the kind of place where the regular users are efficiently served in pleasant surroundings. Accordingly, we must design a building which will facilitate, to an optimum degree, maximum individual access to knowledge, and it is perhaps unnecessary to say that we do not want any reading area to be monumental for reason of its lofty ceiling. Again, we are building a library, not a monument. If we build a library that truly serves the great ends of librarianship, it will be a monument because of what goes on inside it rather than by reason of a high ceiling in a reading area or in a front lobby."

"Monumental" does not mean just Doric, false flying buttresses, or bastard collegiate Gothic. Those buildings we now criticize for being monumental were once thought to be beautiful, and the architect was not wasting money; he was, as he considered it, lifting up the spirit of man, giving a soul to the building, adding dignified beauty to an otherwise dull structure. We see it now for what it was, Veblenism, an ostentatious waste of space or material, or both. I fear that others, seeing this conspicuous consumption, also may be tempted to invidious comparisons.

The general size of each floor, except the bottom one, is 138 feet by 138 feet. The library has 153,600 square feet. The "big hole" is 42 feet by 49 feet, or 13,706 square feet. Because of the large bottom floor, that amounts to about 8 percent of the entire building and about 10 percent of the floors it occupies. About one third of the medical school libraries in the country serve their institutions with less than 13,706 square feet.

The hole, with adjacent area unused, is 70 feet by 76 feet, or 5,320 square feet, which is 35 percent of the main floor. In other words, one third of that large floor is entrance. To look at it another way, at $20 a square foot, it costs $275,000. At the cost that Harvard paid for this building, $30 per square foot, it cost $410,000. My library, for comparison (a new one), serves medicine, dentistry, pharmacy, nursing, and the allied sciences and cost about $450,000; it holds about 350 people and 150,000 volumes.

I am sorry to make such a point of this, but Harvard has long been an example to other schools and there might be, God forbid, an imitation. The National Library of Medicine also has a new library and clerestory but nothing the size of this one. Let us try not to start a trend backward.


HUNTINGTON HALL
A
REFERENCE STAFF
PUBLIC CATALOGUES
PLAZA ELEV 39'-6"
REFERENCE LIBRARIAN'S OFFICE
CATALOG WORK ROOM
CATALOG DEPT
HEAD CATALOGER'S OFFICE
RESERVE BOOK READING ROOM
ENTRY VESTIBULE
ACQUISITION OFFICE
ACQUISITION LIBRARIAN OFFICE
ELEVATORS
BOOK SELECTION (ASSISTANT) LIBRARIAN
SEC & WAITING SPACE
HEAD LIBRARIAN
ASSOCIATE (SML) LIBRARIAN
COATS & PARCEL LOCKERS
CIRCULATION LIBRARIAN'S OFFICE
CIRCULATION SERVICE AREA
3
MAIN ENTRANCE & STAFF
1/8" = 1'-0"

Hugh Stubbins & Associates, Architects

Francis A. Countway Library of Medicine
First floor

Main floor

Now, let us stay on the main floor a bit longer. Libraries tend to fall into two classes: those which confront the new reader upon entering with corridors or confusion and with the baffling question, "Where do I go to find the books?" and those which present such a reader with a reasonably clear picture of where to go. Ideally the reader, upon stepping through the front door, should see at once the several important services—reserve books, new periodicals, indexes, public catalog, and the like—and know where he wants to go.

The entrance here is one of the most blind I have ever seen. To the left is the reserve room, to the right is the charging desk, and across 120 feet of space, the public catalog. Those are the services the reader gets out of a floor of 15,000 square feet.

To get to the public catalog he can go down the right side for 120 feet, past circulation, past coats and parcels, past the associate librarian's office, the head librarian's office, his secretary, and the acquisition librarian's office; or he can go down the left side, past reserve books, the head cataloger, the catalog workroom, and the circulation librarian's office.

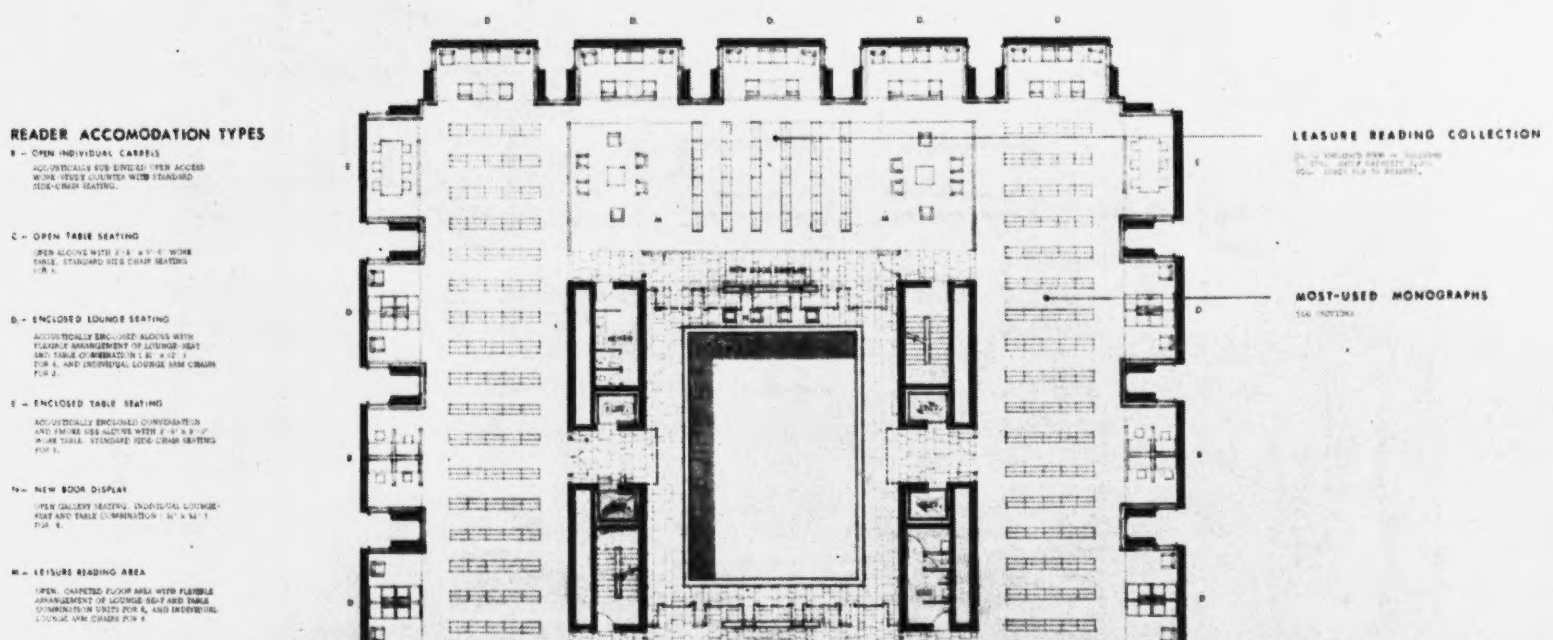
The program recognized this as a problem before planning. The needs of the reader are served when optimum operation efficiency is realized. To effectuate this idea, priorities were set up based primarily upon two considerations: frequency of reader use and high service value. The priorities were:

1. Central core area; highest frequency activities
2. High frequency areas
3. Low frequency areas
4. Lowest frequency and lowest service value areas

Under priority No. 3 were given, with less-used periodicals and monographs, the administrative offices and book selection office. Under priority No. 4 were given the acquisition staff and the cataloging staff. Personally, I have never thought of the main entrance as that low in priority.

On this floor there is no reader space beside the reserves. Also, if there is retrieval for the individual patron by call system, chutes, or delivery service, there are few places to wait.

Francis A. Countway Library of Medicine
Second floor


READER ACCOMODATION TYPES
B – OPEN INDIVIDUAL CARRELS
C – OPEN TABLE SEATING
D – ENCLOSED LOUNGE SEATING
E – ENCLOSED TABLE SEATING
N – NEW BOOK DISPLAY
M – LEISURE READING AREA
READER DISTRIBUTION SCHEDULE
LEASURE READING COLLECTION
MOST-USED MONOGRAPHS

4
MOST-USED MONOGRAPHS
Hugh Stubbins & Associates, Architects

There seems to be a partial corrective, at least, and not a difficult one, for cutting the 120 feet to the catalog. Take either the left or the right offices, shift them to the back of the library, and put the public catalog in that space. It would save 50-60 feet per patron and put these low priority functions in a more appropriate place. This should be done anyway in order to follow the program, which says: "The circulation desk should be as close as possible to the public catalog, and it should be a part of the reserve books service area." The arrangement will put the catalog much closer to the indexes-abstracts, as the program suggests. Incidentally, the indexes-abstracts do not fit the program, for they "should be set down in a central area not too far from the single entrance door." They are downstairs—a minimum of 60 feet and a flight of stairs from the entrance and even farther from the elevator.

One further item on the main floor. There should be a flight of stairs at the front door serving the down floor, where the new periodicals and indexes-abstracts are, and the up floor, where the new books are.

Other floors

After you get off the main floor, you are in a good library. The lowest, or storage, floor is good and, if I read the plan correctly, has a transformer room to hold the fluorescent light transformers which have a bad habit of degrading to an annoying hum.

The floor above this one is good, except that there seems to be a division of the new periodicals into two sections, separated by that hole. The remaining floors are also good. I did not concern myself with the history of medicine floor and the offices for the two journals.

There are some small general items I should like to mention. There should be a janitor's closet on every floor. The air movement for a building of this vertical size is achieved with a remarkably small space. For some reason there are doors to these conduits on two floors. The tape and recordings library does not seem large enough for what the program requires, and there seems to be no place to show slides or films. There might be a need for rooms larger than the usual ones, for seminars or conferences.

There are two very fine points to this library. First of all, it has done away completely with the main reading room concept, thus truly achieving a position of student and book. Secondly, it has most wisely separated the old periodicals from the new and highly used ones, and does the same with the old and the new books. This is most commendable.

ROBERT CERNY

I think that the record should contain some rebuttal, because I can see certain weaknesses in the criticism and a utilitarian tendency which could mislead many of you in the future.

This medical library has a student or use capacity of 700 students of a fairly sophisticated group—certainly a group you would think would be more skilled than any usual group. I am not suggesting, of course, that one should design a library poorly or inefficiently, but only that there is a difference between the kind of students who use the library at Harvard and the 5,000 students who flow into the San Diego Library on a kind of mass education basis.

I noted also in this program the fact that the larger percentage of the books were owned originally by the Medical Society of Boston and that the society continues its interest in the building. It is therefore a joint venture with Harvard. Now, to the extent that this becomes a building partly dedicated, let us say, to the medical profession in Boston, I think it has a perfect right to a little higher level of quality. The danger I see here is that one might begin to apply the same set of standards to two different buildings.

Now, I would hold out for efficiency in any building, library or otherwise. However, I think that many of you may still be suffering from the reaction to the Carnegie type of library, which really did not function. You might continue this pursuit of function to a point where you will achieve a kind of supermarket efficiency, but I think this would destroy an important purpose of a library.

You are, after all, it seems to me, not only dealing with books but proposing to foster an interest in cultural subjects and good literature, and in those things which in the final analysis may not be quite practical. I am not sure how practical it is to read a volume of Shakespeare. I am not sure how practical it is to walk forty feet more to a card catalog. However, I do think that if an aesthetic effect is involved, this has some validity. I think also that if the Medical Society has the funds to put a $10,000 statue in the middle of a lobby, this is not totally wasteful. Therefore, I believe that the discussion ought to be answered and this utilitarian tendency ought to be challenged.

Now, one practical matter. It was suggested that by having this open court, there were many thousands of square feet lost as well as thousands of dollars—well, this is not true. This plan does not cost anything. You pay for the floor and the roof. I can tell you from my experience in building that courts are not expensive.

My family has often come here to Chicago during the Christmas season to do some shopping, and we inevitably go over to Marshall Field's where there is such a court. At that time of year it is decorated and, as a result, is a joy for all to behold. I don't think it would harm anything if a person going to a library found it contained a feature that would bring some joy, some aesthetic quality. Further, if I had spent two or three hours in an autopsy room or in some other typical medical activity—medicine does have some sordid aspects—it seems to me it would be highly desirable to come into an area which has contrasting quality. Magnificence, if you will.

DISCUSSION

Question: In the light of all these new electronic devices, particularly with regard to medical information, do you provide any room for the future where these can be handled?

MR. ESTERQUEST: Those of us who have been thinking about this building in terms of the dawn of the new machine day have been groping with the implications of your question. We have studied it. I have read the literature and I go to the conferences. The best answer that we can give is that, when we occupy this building, we will still be in a world of books and journals and card catalogs. Our plan has had to be in these terms. However, the building is flexible in respect to partitions, power lines, floor loads, and so on, so that in almost any area we can convert to housing for machines in locations which will be appropriate for their uses.

Question: Did I understand correctly that there is no stairway down to your basement or up to your second floor, which are your heavily used floors, and therefore you are dependent on elevators?

MR. ESTERQUEST: The most frequently used area in this library will be that housing the last ten years of journals. We assume that this is going to account for 60 percent of the total use. If you remember the floor plan, immediately inside the front door there is a sweeping circular stair that drops down something like 12 feet into this frequently used area. That is one place where there is a central court stairway. Serving all other floors are two sets of enclosed stairways, but not part of the central court. We assume that people want to ride when they go up. There are four elevators at convenient locations, serving all floors. When you press one button and the elevator is busy, then the one next to it automatically comes to you.

MR. FRY: Of course, the explanation with regard to the elevator system is not that simple, especially because of the core. You have available only two elevators on the one side and two on the other side.

Question: Do you have provision or need for any kind of call system for the medics? Will it tap into the house call system or are you planning some other device? I have in mind the paging of doctors.

MR. ESTERQUEST: The scheme that we have evolved uses the Stromberg-Carlson Pagemaster, or a similar device. A doctor coming in, if he wishes to be paged, picks up an instrument which he puts in his shirt pocket. It has a number on it. For instance, if his instrument number is 21, and a telephone call comes in for him, then all that is necessary is that the desk attendant press master control button No. 21, whereupon the doctor's instrument will beep. He then goes to the "green telephone" on the floor where he happens to be, makes his presence known, and receives his call.

Question: Do you have any provision to divide space in your building to make possible extended or even all-night use of certain areas and locking the rest of the building?

MR. ESTERQUEST: We have not. We were influenced by the medical librarian at the University of Minnesota to consider this, and we listened carefully to an explanation of the virtues of an all-night room. However, our final decision was that this possibility of use was not needed in our situation. I cannot remember all of the rationale involved. What we have attempted to do is to design a building which can be operated with a minimum staff during the late evening hours. Our present plans contemplate our closing all of the building at midnight.

MR. WOYTUK: I would like to clear up something on level No. 3. The open court in the floor does not have the dimensions that Mr. Fry cited. In fact, it is quite a bit less. On this particular level it is only about 20 feet by 26 feet for the entire stair opening. As the reader moves in, he moves directly and smoothly to both sides, to the elevators. On the other floors, the circulation area and galleries are on the inside of the towers as well. If my figures are correct, about 10 percent of the floor area is used for circulation, and I would say that this is very good. Usually it is from 25 to 30 percent in buildings of this kind. Those who read the proceedings of this meeting would be well advised to check the arithmetic on these dimensions with great care.

There is also a history to the split-core arrangement, as we like to call it, and also the central well. We proposed three specific alternative possibilities to the library staff, and after a great deal of deliberation and analysis it was easily seen that a solid core in the center, which was very tempting because it seemed very efficient—and, of course, had no distinction—used up approximately the same amount of space as we now give to the open central well. The reason for this is that the mechanical equipment requires more return air ductwork here. The central well is now used as a return air duct, and thus, to answer Mr. Fry's question, there is indeed surprisingly little ductwork.

Question: Do you propose to expand this building, and if so, how?

MR. ESTERQUEST: A great deal of analysis was given to this matter. This plan does not provide for an addition or any expansion other than the possibility of more burrowing underground in order to create additional space at the lowest level. Three considerations argue against planning for expansion space as such:

First, the New England Deposit Library is only a mile away, and we can put our least-used materials into that library for storage when we reach the capacity of this building. This is quite a way in the future as we have projected growth patterns.

Second, our analysis of the medical and scientific literature shows that obsolescence sets in fairly rapidly. Even if this building were full, about 90 percent of the collection would be low-use materials. Therefore, it seemed quite inadvisable to me and to my colleagues to present users of this library with an increasingly high percentage of obsolete materials which would just get in the way. It seemed much better to weed out the collection and keep it reasonably fresh, especially when the older material could be close at hand.

The third consideration is the big unanswered question of the nature of the information retrieval process twenty to twenty-five years from now. The assumption is that mechanization and miniaturization will eventually ease the ever expanding growth problem. Taking these three factors together, we felt there was no need to build a capacity larger than for 750,000 volumes.

Before we adjourn, I believe it would be useful for me to comment on two or three points raised by Mr. Fry's admirably forthright criticisms. I am partly inclined to agree that our ninety-page building program was perhaps too long. But I believe it is better to err on the side of being too long than to leave important things unsaid. In our case, we felt it desirable to convey to the architect a great deal about the climate of our medical community, the quality of our educational program, the subtleties of our library objectives, and many of the intangibles. We devoted space in the program to such matters as "the nature of repose" and "the proper environment for thinking and contemplation." Harvard's educational philosophy and "how current journals are used" came into it, as well as definitions of "generous space." I am a great believer in a full and adequate program, that really communicates to the architect the goals and purposes of the library.

As to the central court being "waste space," I will simply report that several of us in the Harvard libraries gave this matter very serious thought. I could write a book on the ramifications of this discussion. Suffice it to say that there is very little "waste space" actually. Even considered pragmatically, it is a tiny percentage of the whole. Efficiency and traffic flow are not reduced more than the typical central utility core would reduce them, and this is literally true. By the open court we are gaining truly important aesthetic values and, in addition, the opportunity for the entering reader to gain a direct view of the library's services—a feature Mr. Fry has emphasized. This overview is had by looking up and down as well as to the left and right.

In this matter of the central court, we have not departed in any significant way from the stated objectives of our building program, which, as has been quoted, called for "pleasant surroundings." This element was not lightly requested. The floor areas around the open court are not "waste space"; they are heavily used, horizontal traffic lanes.

It is true that the card catalog is not right at the entrance door, but in a medical library the catalog is not the all-important tool it is in some other libraries. Furthermore, we expect soon to convert to a book-format catalog, with copies widely distributed. At the same time, our present catalog will not be so remote as Mr. Fry has suggested. The reader's walk to it will consume a few seconds, and he will pass through, not a factory, not a supermarket, but a pleasant, indeed a lovely, environment.

San Diego State College Library

San Diego, California

STATISTICAL DATA

Architect: Division of Architecture, State of California, Los Angeles Branch
Frank L. Hope and Associates, Consulting Architects and Engineers
Type of library: University
Population to be served: 28,000
Area: 300,000 square feet
Book capacity: 1,000,000 volumes
Seating capacity: 5,000
Cost: $9,295,000
Building: $7,445,000
Equipment: $1,200,000
Site: $650,000
Cost per square foot: $23 (construction cost)

PRESENTATION OF PLANS

Executive Dean: Darrell Holmes
Librarian: L. A. Kenney
Architect: Frank Hope
Critic: H. Dean Stallings, Librarian, North Dakota Agricultural College, Fargo, North Dakota

DARRELL HOLMES

I am here to state the obvious. However, it does need to be said that our faculty, our administration, and our California State College board of trustees place the number one priority on the proposed library. We have been working on our library for some two years. It is now in the planning and discussion stage, where ideas are fermenting and people are communicating, sometimes in decibels that approach those of a high school corridor when classes change. It gets loud but it is, nevertheless, a lot of fun.

We are in the master plan phase of our planning. In other words, we are not going to present any details. We are not in the schematic drawings as yet. They have not been officially approved.

What we really need today is to take a look at the various items. In other words, we want to take a look at the million dollar items and worry about the thousand and hundred dollar items later on. We are interested in reactions to our proposals for the location of the library on campus and for expandability. We are also interested in any way we can introduce flexibility—internal flexibility—into the campus library and in the use of equipment in arranging space.

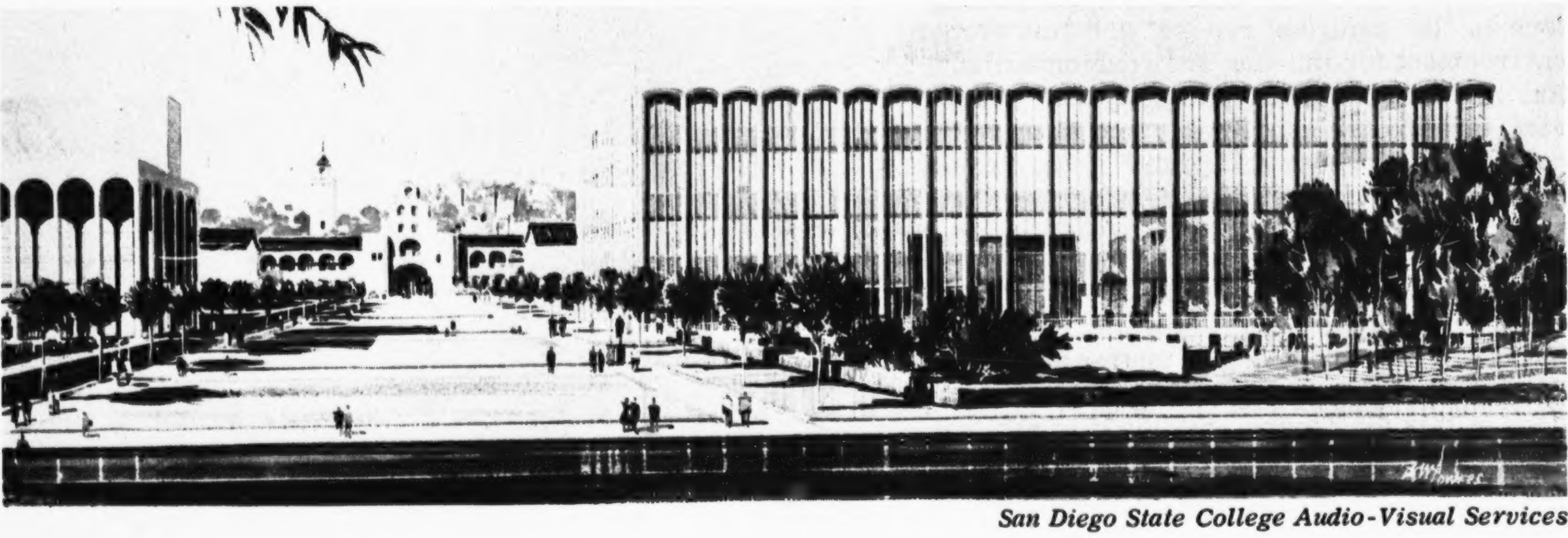
L. A. KENNEY

I should like first to summarize briefly from our building program as it is stated now. San Diego State College was founded in 1897 as a normal school. It became a liberal arts college in 1935. After World War II, it began to grow very rapidly and at the present time adds 1,200 students annually.

The 1963-64 enrollment of 14,000 students will double by 1972 and will remain stable at about 28,000. Present graduate enrollment of 3,000 will also double. It will probably continue to be about 12 percent of total enrollment.

The present function of the college is to provide instruction for undergraduate and graduate students in the liberal arts and sciences, in applied fields, and in the professions except medicine, law, pharmacy, architecture, and a few others. Teacher education is still important. The doctorate may be given in about fourteen fields during the next ten years; graduate work, through the master degree level only, in about thirty-two fields is offered now.

San Diego State College Library
Architect's rendering



San Diego State College Audio-Visual Services

Research is not a major function but is part of the college program insofar as it pertains to instruction and maintaining faculty competence. In publicly supported higher education in California, the major research function is still reserved to the University of California. A total of 237 master's degrees was granted in June of this year, along with about 1,750 bachelor's degrees.

Old building to go

The present much-added-to, old library building, with 120,000 square feet of floor space, is to be abandoned. The new library will be organized essentially along subject divisional lines, like the present old library which contains these four divisions: (1) humanities, (2) social sciences and business administration, (3) education, and (4) sciences and engineering. Added to the four subject divisional libraries in the new library will be:

A general reference desk on the main entrance floor, whose staff will also man the information desk at the card catalog
A central periodicals department for all periodicals, both bound and unbound; initially, it will contain 55,000 bound volumes and 4,000 current titles
A documents department

The building is to be inviting to both undergraduates and graduate and faculty readers. The philosophy of library service expressed in the building is that a library is more a service to students than a storehouse for books. Undergraduate library service will be separated from the graduate and research function about five years after the new building opens, when the classrooms and faculty office areas will move out. Otherwise, neither the undergraduate nor the research function will be adequately served.

The building will be as flexible as possible. This is extremely important, not only because we cannot predict future developments, but because humanities classrooms and faculty offices will at first share the building. When they move out, the library will take over the space. Eventual capacity of the building after the classrooms go will be 5,000 readers—one quarter of the full-time equivalent enrollment—and 1,000,000 volumes—nearly four times present holdings.

A major influence on the planning of San Diego State College Library is the requirement that the building conform to a pattern set forth by the Faculty Senate in its "Policy Statement on Library Development." The college president has confirmed that the policy shall govern the organization of the new library. The policy calls for: (1) a comprehensive central collection, in one location and in one unified stack area, of more than 1,000,000 volumes; (2) a central reference desk; (3) a central periodicals room in which all periodicals, bound and unbound, are kept with adequate adjoining reading space; (4) a documents collection shelved in a single location, with a documents librarian in charge.

The policy says there shall be a "forms and processes" library—books, periodicals, and documents—rather than a subject divisional library. A redeeming factor is the ambiguity of the provision calling for a central reference desk, because it does not specify that there shall be no other reference desk. We are assuming we will have the four divisions in addition to a general reference room.

San Diego State is planning one of the largest university-type library buildings in America. No decentralization of library services or collections is projected. The college will be a multipurpose university-type institution.

One complicating factor in planning is the temporary inclusion of humanities classrooms and faculty offices in the building. Another has been the Faculty Senate demand that the present subject divisional library be discontinued and the old forms and processes library be restored with its one central bookstack, one periodicals collection, and one documents collection. The library staff, however, prefers a true subject divisional library, but has compromised with the faculty by agreeing to having four subject divisional libraries and, in addition, a general reference desk and a central periodicals room, as well as a documents department. A provision of a closed research stack for faculty and graduate students is being postponed until the humanities classrooms and faculty offices are moved out about five years after the building has been built.

FRANK HOPE

We have been working on the master plan for two years. It has been accepted by the board of trustees and is an official document. San Diego State College is located along the bluffs overlooking Mission Valley, approximately ten miles in from the coast line. In this location it is the approximate center of its service area. It draws equally from north, south, east, and west. The climate is delightful. The sun shines most of the time. It is out of the fog belt. Outdoor activities are possible and desirable in this area.

The topography is another story. The campus is at the end of a mesa area. Splitting the campus property is a canyon that has been partially filled and developed. There is very little development in the south and southwesterly portion of the campus; most of the development to date has taken place in the north end. The concentration of this development on such a small portion of the campus property has led to several serious problems. Physically getting students, in ever increasing numbers, back and forth between the various buildings and particularly to the library building, situated on the north edge, presents circulation problems.

North of the amphitheater is the proposed location for the new library building. The existing library building, now in the life sciences area, will be completely occupied by the life sciences division. The core of the campus is seven and a half minutes' walk from edge to edge. This provides that the library can be reached from virtually every building on the campus in about three to four minutes of average walking time.

In the upper campus sector there will be approximately 12,000 full-time equivalent students, and in the lower sector approximately 8,000-9,000 full-time equivalent students. In the master plan we have achieved a split of this load of students, and, of course, the library then becomes the focal point of the campus.

I would like to say a few things about the concept of the plan. It proposes to relocate from the central academic core area those items not necessary to students and faculty during their normal daily operations. We are in the process of purchasing property to the south; relocating the administration building, the health services building, and the women's gymnasium facilities; and developing parking at a large parking area in order to balance parking on all sides of the campus.

Key features

One of the key features of the master plan is the development of a pedestrian mall that will start at the south edge of the campus and extend in a direct line to some of the oldest existing buildings on the campus. Another key feature is that automobiles are eliminated completely from the academic core area. We have service roads on the perimeter of the academic core area and, of course, service roads also serving the buildings as required. However, no automobiles will be allowed on the campus. This rule is partially in effect now and is working quite well.

A forecourt area is designed as a student gathering place—an important adjunct to the library; it also recognizes that the library will be the central or focal point of the campus. Quads or courts are created wherever possible. The library, together with the speech and drama classroom building and other buildings being undertaken, will tend to frame the image buildings of the old campus. The mall is now under development and will be completed probably this year or next.

As master plan architects, we cautioned, urged, and advised that this must be the ultimate building—there was no chance or possibility to make any additions to it of any major consequence. This had a great effect on the design of the building.

The main levels of the library, the one starting at the main level of the campus and the four upper levels, will be occupied initially and finally by a library function. Still to be decided is whether the humanities classrooms and offices should be located in a group at the lower level, or whether they should be scattered on various floors of the library. There are both good and bad points to this arrangement.

Flexibility is of key interest. The initial concept has been that this library should be designed with the same type of thinking that goes into the designing of a new office building. There should be movable partitions, flexible lighting, air conditioning, and access to power and telephone.

MR. KENNEY: There will be an access to the humanities classrooms and faculty offices outside the building. That is, there will be a pedestrian way, and it will be possible for students to enter these classroom areas from the outside, using separate entrances. This will be on the lowest ground floor.

A difficult problem in planning the main floor was the traffic and access for a building that is eventually to handle 5,000 readers. It was soon realized that one entrance, one control point—at least to the main floor—would not be enough. At present, therefore, there will be access from the east, west, and north to this main floor.

The central periodicals room will be on this floor, as well as the reserve book room. Since there will be control in the reserve book room and the periodicals room, we have an open access to the floor. Technical services also will be here as well as the circulation areas. They include a central circulation desk area, public card catalog, and bibliography room. The control point will be where patrons go to the upper floors. That will be the only control access to and exit from the upper floors.

On the fourth floor will be the humanities division, which will serve some 1,400 readers and hold a collection of about 78,000 volumes. One feature will be a music listening area for 82 listeners, either in large rooms, where earphones would be used, or in small listening booths.

We are going to request escalators for moving the large number of students inside the building, as otherwise there will have to be a sizable number of elevators. We do not know how many escalators as yet.

The social sciences floor will be similar to the others. The central circulation vertical cores will be the same, but a future and special area on this floor will be the documents collection. There also will be a considerably larger book collection, around 140,000 volumes, and seating for about 900 readers.

The top floor will contain two divisional reading rooms. There will be the education division which, at our institution, features a very large curriculum materials center of more than

40,000 items. It has laboratory-type conference rooms, where students who intend to become teachers come and study curriculum materials of other schools and institutions throughout the country. The sciences division will be in the other reading room. The periodicals will have to be separated from the science books and put into the central periodicals room on the main floor.

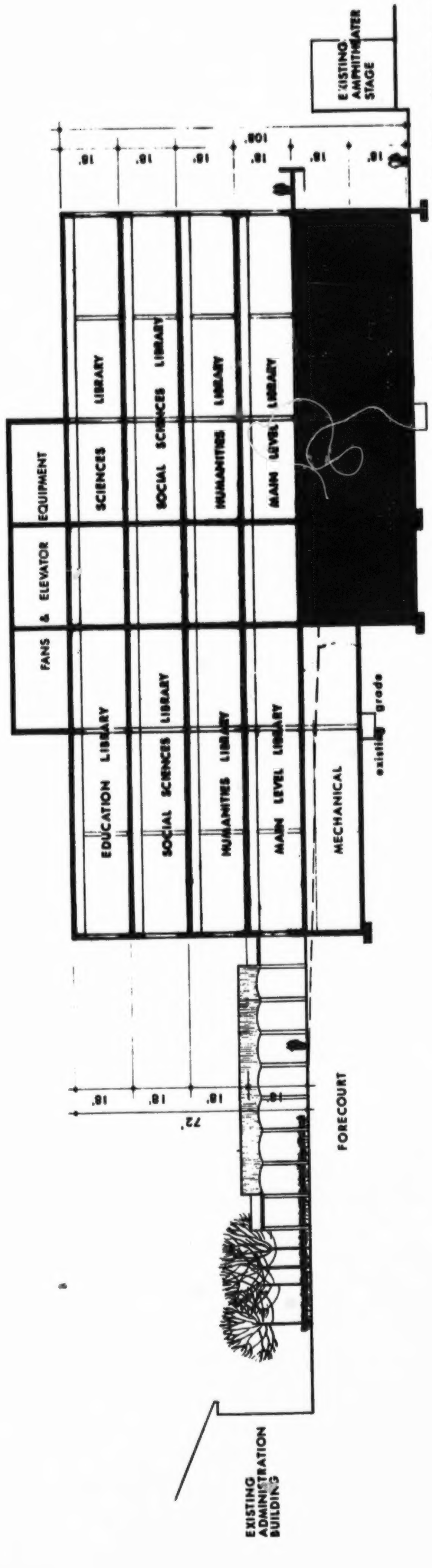
MR. HOPE: The mall that we have been talking about runs past the library on the west side. The library will be to the right, and the speech and drama classroom building to the left, framing the existing Spanish buildings and the tower for the campus. We want to see here a building with the inherent dignity that we feel a library building should have. It is an important building and is going to be the most important building on the campus for many years to come.

Further, a building of this size, some 300,000 square feet, is a rather imposing structure to place right in the middle of the campus. At the present time it will be the front door to the campus, the first building you see. We feel that the library, as well as being dignified, should be friendly. We want people to come inside and to see out. We also want people outside to be able to see in. We have designed a building that uses a great deal of glass. In fact, other than the columns and the areas at the spandrels, it will be all glass. We will use opaque glass.

The materials other than glass have not been determined, but I am sure some form of concrete will more than likely be used. The use of glass creates other problems in connection with air conditioning. However, we have had experience with them before in a recently completed large office building in San Diego, and we found that we could handle them even in an office building. We are hoping that the design philosophy of this building will restrict the number of small offices or rooms close to the outside walls. If we do not have these small offices or rooms, then we can handle the air conditioning satisfactorily, particularly through the use of Thermopane and probably glare-reducing glass.

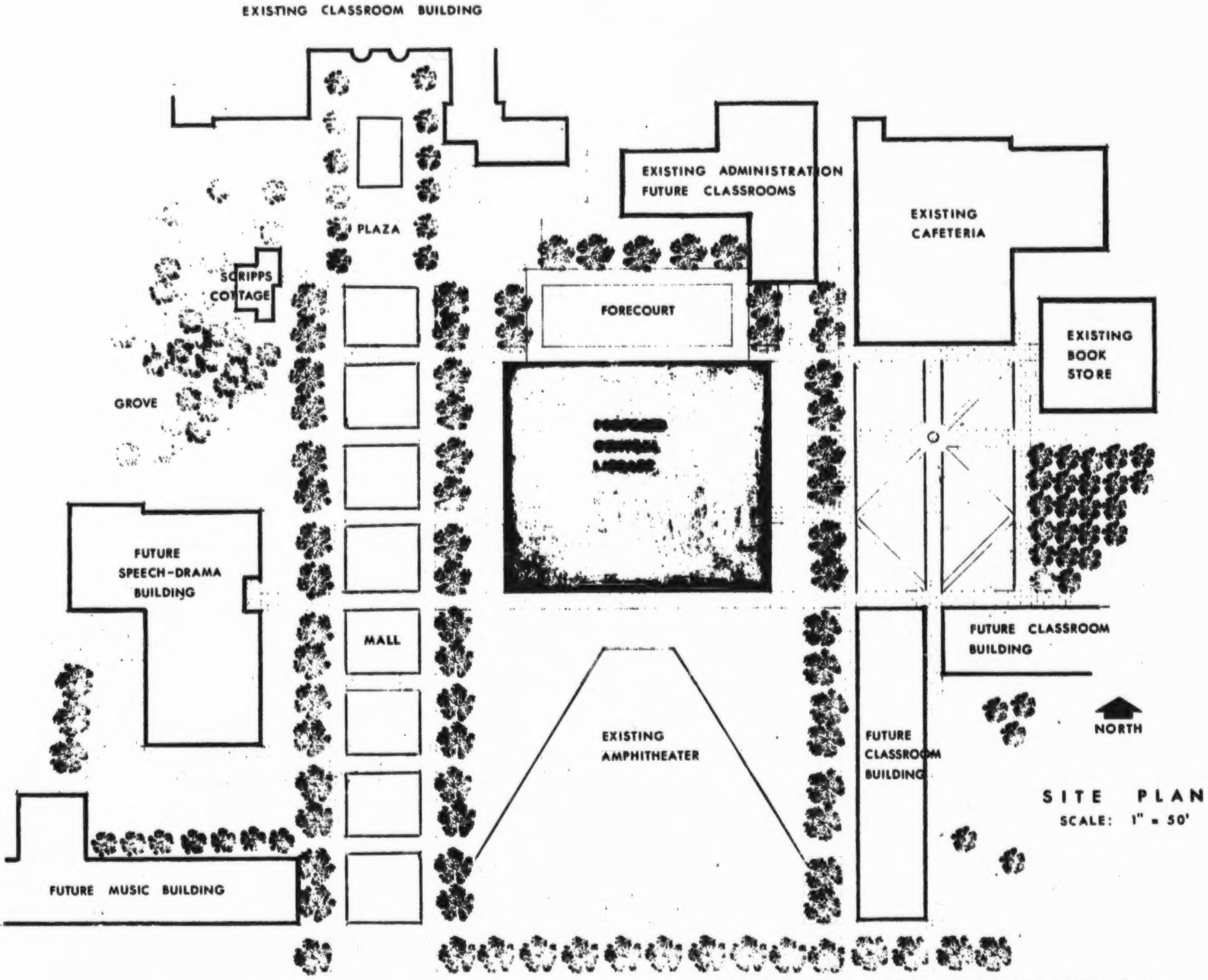
H. DEAN STALLINGS

I would like to start out by commenting on the library program that the San Diego people followed. While the librarian quoted some of it, I would like to reiterate what it includes. There is a description of the San Diego College Institutional Program; its faculty, graduate, and undergraduate students; and projected growth. Also it includes the unique factors concerning San Diego's institutional and research functions; a statement of generally accepted current functions and regulations of library science; and architectural characteristics—spaces, functions,



San Diego State College Audio-Visual Services

San Diego State College Library
Side view


EXISTING CLASSROOM BUILDING
PLAZA
EXISTING ADMINISTRATION
FUTURE CLASSROOMS
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FORECOURT
EXISTING BOOK STORE
GROVE
FUTURE SPEECH-DRAMA BUILDING
MALL
FUTURE CLASSROOM BUILDING
NORTH
EXISTING AMPHITHEATER
FUTURE CLASSROOM BUILDING
SITE PLAN
SCALE: 1" = 50'
FUTURE MUSIC BUILDING

San Diego State College Audio-Visual Services

San Diego State College Library
Site location

and relationships—described in some detail. I think that the architects have done a very good job in these four phases of the library building program.

I do not know how much criticizing I can do on this building because it is still primarily in the early stages. I believe, however, that we might question one or two items. First, I think the college is very fortunate in being able to locate the building square in the middle of the campus. Very few libraries being built at this stage of development have that lucky choice. Secondly, the terrain is such that the main entry can be put on the third floor. This puts the majority of the books nearest to the patrons —a very good arrangement.

I would question whether or not the trend is toward separate departments or periodicals departments. It has been my experience that magazines are used a lot more if they are classified and put with the books. However, I do know there are definitely two schools of thought on that matter.

Another thing we might question is that most schools, as they approach 1,000,000 volumes, have started thinking about a separate library for the undergraduates, consisting of about only 100,000 volumes. Here there is going to be a student body of approximately 20,000, about 18,000 of whom will be undergraduates, and this large a book collection will still be furnished. I suppose that this is the trend and something that we will have to look forward to. Last year, for example, the college gave out some 250 master's degrees and, therefore, it must certainly be considered as a graduate school.

I believe the college is very fortunate, since I happen to be a nondepartmental library man, in that a rule in the state administrative system states there can be no departmental libraries. Therefore, it is not blessed with that little problem.

One thing I do not see is this dimension of 18 feet between floor and ceiling. I happen to be a low-ceiling modular supporter and, therefore, I cannot help but think there is going to be between 5 feet and 6 feet of waste space up there somewhere and that this space is going to cost a lot of money. The architect indicates there is nothing sacred about the 18 feet, and that about 4 feet of that figure will be used for ductwork and ventilation. So it is not all quite wasted.

A last thing I would comment on, since I built the only library in the country without windows, is the heavy use of glass. This reminds me of the experience that the planners had down at Georgia Tech. They put in windows like that in the front of the building. It cost a young fortune to do so, and then they later found that they likewise had to spend another young fortune for draperies to cover them up.

DISCUSSION

Question: Will somebody allay my fears as to the proximity of the amphitheater to the library? I wonder if, when functioning, the amphitheater would not disrupt the quiet and dignity of the library facility?

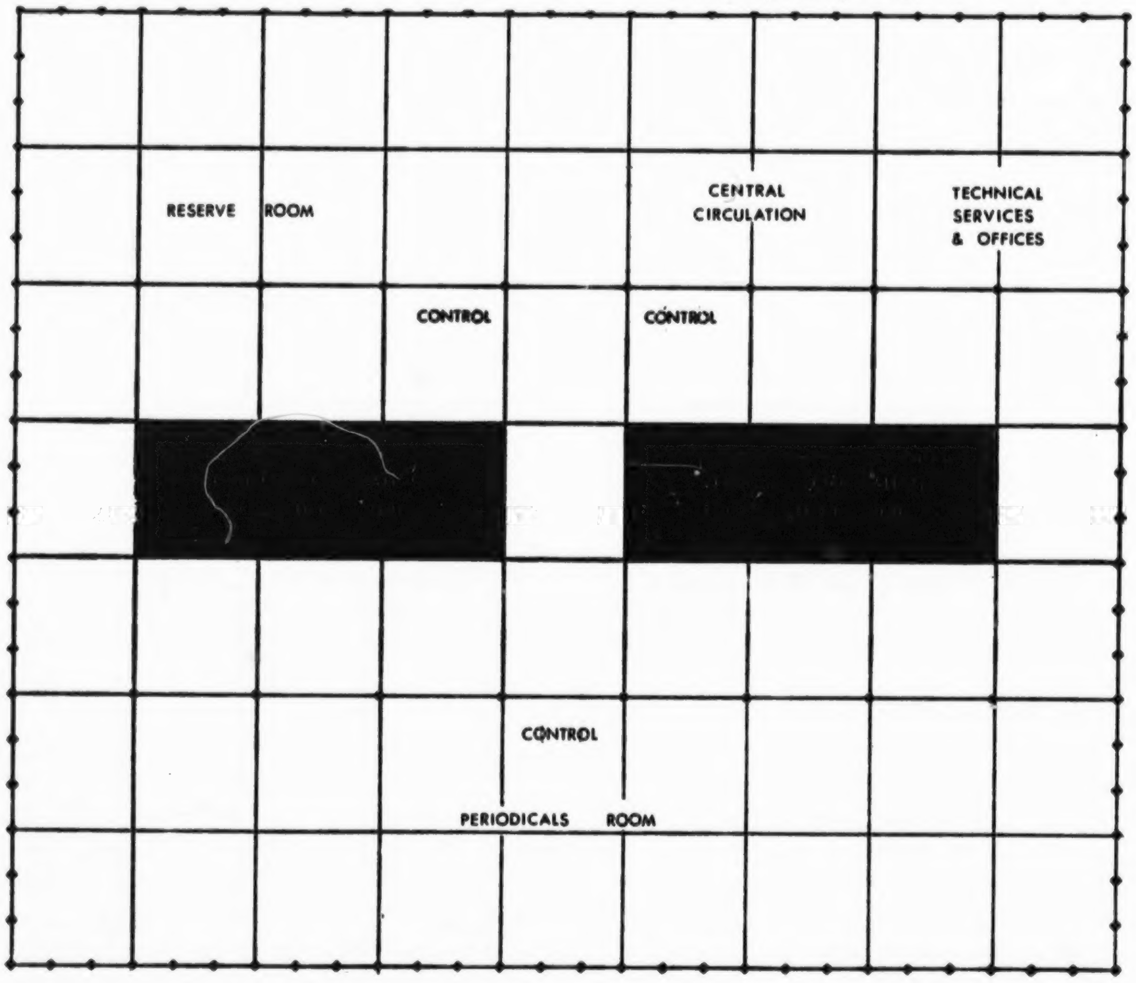
MR. HOLMES: We have a real sacred cow with that amphitheater. It is used only for graduation and holds 3,500 people. This year we had 25,000 or 30,000 who attended graduation, and so it is not even good for that. There was a movement afoot to abolish it. However, since it is reminiscent of the old Work Projects Administration, as well as has historical significance, I suppose it will remain.

MR. STALLINGS: The only other comment I have, and this is one for which there is no immediate solution, is the parking. I suppose that, with 20,000 students, some 19,700 will own cars, and parking, therefore, is going to be a rough item. However, I am told that shelves are now being built in those cliffs, and parking will be made available down in the canyons.

Question: If this institution is going to remain primarily a place for preparation of teachers, why put the collection in education on the top floor?

MR. HOLMES: This is a historical heritage. Eight percent of our students are enrolled in teacher

San Diego State College Library
Third (Main) floor



San Diego State College Audio-Visual Services courses. However, we are much stronger in the sciences in terms of numbers, much stronger in business administration in terms of numbers, and so on. Therefore, San Diego State is really a multifunction college, and we will probably be offering a Ph.D. degree within the next year.

Question: If the sciences are going to play such an important role, why punish them by taking the science books away from everything and putting them on the top floor? I think that if the sciences cannot have a library in the laboratory building, then they should have their material easily accessible in the main library and, if possible, on the first floor.

MR. HOLMES: Then your position would be that the Faculty Senate action which established a periodicals room really works against the interest of the sciences. Of course, we will take that under advisement because we really do not want to build a library that is incorrect.

Comment from the floor: I think it is an open question as to whether you can develop research faculties in the sciences unless they can have their scientific periodicals and literature under the same roof with their laboratories. Here, of course, where you have a very concentrated campus, you can do it, but then I would seriously question as to whether the literature should not be on the first floor merely to make it as easy for the users to get to as possible.

We are faced with the similar problem of a science building. We are groping with it. The question is whether it may not be worthwhile for you to have seminar rooms for the sciences next to the stacks with your major science collections. Otherwise you will have a good deal of traffic—professors drawing books and students dragging books to the classrooms. I am sure you will have this problem unless you intend to isolate some of the collection in a small departmental auxiliary library, especially in connection with areas such as physics. There the faculty are very fussy and sometimes threaten to quit unless they have their collections right under their noses.

I would like to know how you are going to separate these reference files, such as in chemistry and physics, from the known authorities. Are those going to be considered journals with your periodicals? After all, some of these materials are not periodicals, but they are used in connection with periodicals. Therefore, it seems to me that at least in the sciences you are going to create a great many problems separating the books and defining the books from your periodicals. If there is a logical way of dividing the periodicals in this particular library, then you would follow this plan. In essence, I think you have to abide by the plan. I do not believe there is a precise answer to the problem that could be given.

I think there is an answer to almost any operation in a library. If you think there are benefits in staff specialization—that is to say, if you have a specialist on the staff who is allowed to concentrate his energies on the social sciences or on the humanities—then in that case he will not need the periodicals to do his work. Further, if you insist on the policy that the faculty has laid down here, then you must have a general reference service. In that case you can probably still develop some kind of specialization within that general reference service. However, I still think that the staff is going to be greatly handicapped in working in this kind of operation.

I believe that the really important development on this campus is going to be on the graduate level, and your sciences seem to be very well concentrated. Therefore, why not think in terms of a science library that will put the library books near the laboratory?

I can see how, in connection with a campus like this—one which is going to develop—you might be much better served by having three somewhat smaller libraries scattered over the campus in strategic locations, bringing them closer to the classrooms and to the laboratory. At the same time you will still have a feasible and fairly economical operation. I don't think, however, that this possibility has ever been tested.

I think I am correct in stating that the California State College system has established 25 square feet as the standard for a reader, rather than the 30-plus square feet which has been set by most of the authorities today. I am wondering whether you feel this is an inconvenience and if you are cramped under this restriction?

MR. KENNEY: I would say that the reader space on our campus is not quite so small as indicated. There are 25 percent of the total buildings which have a 25-foot standard, and they do provide adequate facilities.

Question: I am a bit curious when I look at this plan and see the central communications through use of escalators, elevators, or whatever it may be, in the central core. How did you get by without having a stairway on every corner of the building?

MR. HOPE: Circulation has not been gone into in detail. We do hope to restrict vertical circulation to the middle of the building. Of course, we can provide for as many as four exits or whatever fire regulations will require.

MR. METCALF: I would suggest that before you get too far along with your plans you have other studies made. One you should have made is whether you can get 5,000 students and 1,000,000 volumes into that 300,000 square feet. I am not sure you will be able to make it without too much pinching. Secondly, there should be an analysis made, in connection with an all-glass building, as to the costs in connection with heating and cooling and protecting it from the outside weather. Thirdly, you should have a study of the expense of the 18 feet from floor to floor—I presume this will add something to your cost. I think those are three basic provisions that you need to study very carefully before you complete your plan.

Question: I would like to know why the architect chose this type of plan, where practically the entire building is made of glass.

MR. HOPE: The style of architecture—the arch form—is important to the campus. If you had the opportunity to walk around this state college, you would see arches of every type and description: natural arches and other types, also arches of every kind of material. This is more or less a consistent style which should be somewhat followed through in connection with any other building. Therefore, as consulting architects, we adopted this form of architecture so that all of the buildings would harmonize.

As to the glass, I agree—from a cost basis—that it is going to be more expensive—that it is going to cost more to build and operate a glass building than it would to build and operate a concrete building. However, we just cannot afford any more big square boxes on the San Diego State College campus. We have several of them now. We need a building that will be distinguished and add something to the campus. A building this large, a building of 300,000 square feet, in a solid material, would be unacceptable to us in this location and probably in any location on the campus as well.

Question: I would like to ask the audience if glass is functionally undesirable for a library?

Comment: I understand there is a lot of sunshine in California. I have never been there, but then there is also plenty of it in New York. The amount of sunshine usually varies, as anybody knows, during certain times of the day.

I have discussed this problem completely with our architect, and we agreed that the northern and eastern exposures can have more glass. Likewise, it would be very bad for the books, for the readers, and for the air conditioning to have a lot of glass on the western and southern exposures. During at least five months of the year, at least in our area, the sun shines rather mercilessly, and this presents a problem with regard to glare on the books and readers. Of course, if you are interested in bringing in a decorator, then you might put up some drapes.

Question: How do you arrive at this division of floors equally and exactly for sciences and education and all the rest of the divisions? I did not know they came out that way.

MR. KENNEY: Those areas have not been definitely assigned, and we will solve that problem as we come to it.

University of Waterloo Arts Library

Waterloo, Ontario, Canada

STATISTICAL DATA

Architect: Shore & Moffat and Partners, Toronto, Ontario, Canada
Type of library: University library for the humanities and social sciences
Population to be served: 3,000
Area: 67,785 square feet
Book capacity: 240,000 volumes
Seating capacity: 926
Cost: $1,650,000
  Building: $1,500,000 (estimated)
  Equipment: $150,000
Cost per square foot: $21 (estimated)

PRESENTATION OF PLANS

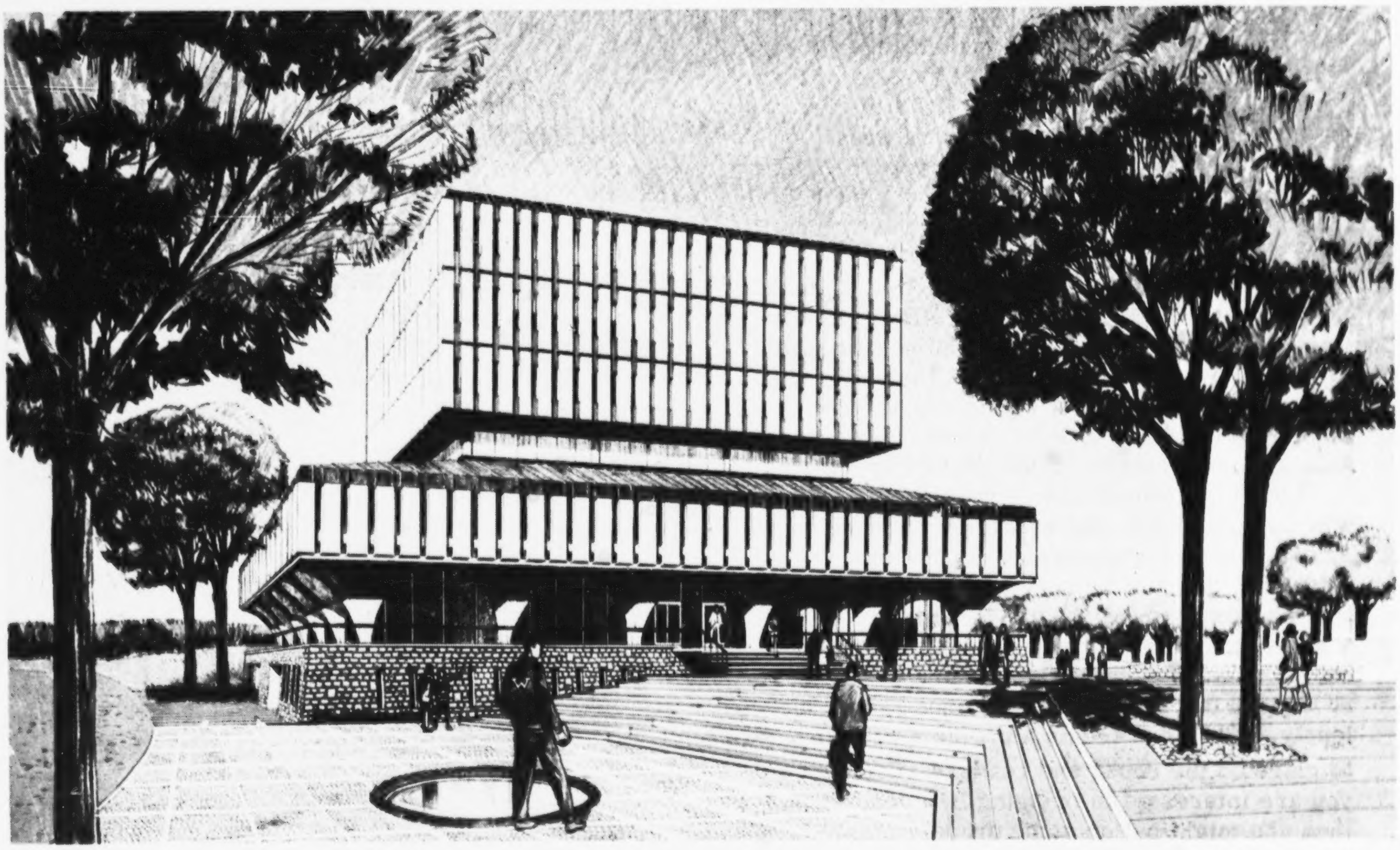
Director of Planning: Michael Brooks
Architect: William Greer
Librarian: Mrs. Doris E. Lewis
Critic: Archie McNeal, Director, University of Miami Libraries, Coral Gables, Florida

MICHAEL BROOKS

This presentation should not be restricted to the library building. It must be related to the manner in which the project is being carried out, the academic function of the library, and its physical surroundings. I shall sketch for you the manner in which we organize and administer a project such as the construction of a building on a university campus. Mr. Greer, a partner in a firm of architects in Toronto and the representative of that firm to the University, will tell you about our campus master plan and some of the details pertaining to our library building. He is a master planner for the new Canadian Association of Architects and Engineers, known as University Planning Architects and Consulting Engineers. His firm also is indirectly involved as advisers in the design of furniture for the new library. Mr. Greer will discuss the campus planning insofar as it affects the library and the architecture of the building.

Then, Mrs. Lewis, our highly competent librarian, will tell you about the function and operation of the library. She will relate it to the academic pro-

University of Waterloo Arts Library
Architect's rendering



Shore & Moffat, Architects

gram and will enlarge on the details of layout of furniture within the building.

First, I should give you a bit of background on the University. The construction of the physical campus started in 1958, though our first classes were held in temporary accommodations in 1957. We expect to have a total undergraduate enrollment in the coming fall of 2,400, of whom 1,400 will be engineering students, 600 art students, and 400 science students. The 1,400 engineering students are cooperating students and so, as a result, only half of them are on the campus at any one time. We are planning to meet an undergraduate enrollment of 6,000 by 1970, plus 850 graduate students. This 6,000 will comprise 3,000 art students, 2,000 engineering students (cooperative), and 1,000 science students. Therefore, you see the explosion is near, and we expect it mainly in the arts.

We possess a trifle under 1,000 acres of campus —973 acres to be exact. The campus plan relates to the 250-acre segment which will accommodate the 1970 enrollment. We do not know as yet what we are going to do with the other 750 acres. We are, therefore, very flexible. We have spent to date about $15,000,000 capital, and we anticipate that by 1970 we will have spent $45,000,000-$50,000,000.

Development of program

The actual organization and administration of the development to our present early-working-drawing stage are as follows: First, for some two years prior to the preparation of the brief, a rapport was built up between Mrs. Lewis and Mr. Greer. All three of us, as well as our vice-president of finance, attended the American Library Association Conference in Ohio two years ago. When the program was prepared by the University, there was already some mutual understanding between the University and the architects as to what was what.

Then the program was prepared on the basis of function only. This was written by Mrs. Lewis on the basis of her knowledge and experience. It also incorporated the thinking of a committee which represented the broad cross section of the faculty of the University. Some sections were written by myself—those relating to matters not directly influencing library functioning.

A copy of the program and sketch plans was sent to Dr. Maurice Tauber for his comments. He offered his constructive criticisms and suggestions, which were acted upon, and the final sketch plans incorporating these changes were prepared. While this was going on, Mrs. Lewis was conferring with her library staff, and I conferred with the president and vice-president of finance.

A final point is that the administration is to be housed in the library until 1967. (It will not be until then that the administration building will be completed.) This is not an unusual state of affairs. The administration's requirements were not allowed to prejudice the library design to any degree whatsoever. In fact, our architects were not informed of the administration's requirements until after the sketch plans were completed and approved.

WILLIAM GREER

I think that after what you have heard, you can realize that the main function of the architect is to be flexible, somewhat like a librarian. We have found that our role regarding the library has been one of searching and listening over a number of years.

We started some two years ago, when we went to the Library Institute at Kent State. We feel that in searching and listening we can recognize the forces which come to bear on a problem. These include not only the program requirements, but also the academic and economic atmosphere of the University. I should underline the word "economic." In long-range planning it has been a particular advantage for us to have been the master planners as well as architects.

As has been stated, the University is now just under 1,000 acres. When we did the master plan, it was just about 250 acres. We had always said it should have more space than 250 acres. Therefore, we now have a master plan and have our library located in relation to that master plan. Some very brief thinking since then seems to indicate that the library is still in the right place on the campus.

I am sure you will agree that the student is the most important person in the planning of a campus and of a library. In the case of the library, it is the student and the research person who uses the library. The librarians, administrators, and architects should not forget this when they are planning, since the University and the library or any other building does exist because of them.

The library is a focal point today for the student. The student can, and should, approach it from all directions if it is centrally located. In the case of Waterloo's campus, the library site happened to be one of the highest points of land on the campus. It also serves as the focal point to the community. Likewise, it is an outward expression of the University community to the population.

The library is centered between various clusters or cells of buildings representing engineering, the arts, and the sciences. The requirement has been that a library should have one entrance for control. Ideally one would like to enter the grounds and the library from any direction, particularly on a pedestrian campus where there are no cars. Based on such a premise, the building does not have one façade but four façades. The repetition of architectural design is precast concrete, and the windows are almost identical. This has been the factor in the design of the building.

Landscaping

The scale of a building must be closely related to the individual who moves around the building. Therefore, the particular spatial relationship between the library and its surrounding buildings is of prime importance. This space must be useful and pleasant in feeling. It is for this reason that our firm has strongly felt that landscaping plays a particularly important part in a campus. We consider the landscape configuration and planting material to be of prime importance. This building was definitely designed to be noticed.

The previous campus buildings have been simple and repetitive in architectural form. As there was not an endless amount of funds coming in from grants and fund drives, they have been particularly economical. We have tried to maintain this same pattern with the new library. As a focal point, it can share in some of the savings, even though somewhat more expensive.

The campus was planned for 6,000-7,000 undergraduate students. It is quite likely that in the development of university expansion in Canada now, and in Ontario, particularly, universities should plan for 50,000 students. Some of them, of course, are planning for more than that. As in many campus plans, the parking is isolated from the buildings and pedestrian area.

The first stage of the library cuts into the hillside. One side provides access for service vehicles at the lower level and, if necessary, for students in wheel chairs, who may then use elevators to the upper floor. The arcaded section is undercut about 13 feet below the upper floor, providing for some control to the larger lower windows.

The upper floor has small strip windows. These surround the stack and reading areas and provide for reading spaces at the perimeter of the floor. The glass used in the windows will be glare-reducing, even though there are some windows which are but 16 inches wide. They are, however, centered on a 4 feet x 6 feet basis and are modular for the stack development. The material between the windows will be precast concrete bearing panels. The windows are small and recessed enough to give a certain amount of sun screening.

There are no columns at the outer wall. The columns are at the inner section, on the upper flooring. The arcaded floor will all be poured concrete. The lower floor will be the same, with facing of local stone. The purpose of the arcade is to isolate the readers on that floor from those who may be passing nearby. It provides some control. It affords a place where a student may sit on a bench and study in the shade, moving around the building as the sun moves. It also bears some relationship to the summer months, to the student who is not necessarily studying inside but may be waiting between lectures and who will go to the focal point of the library. At this first stage, the only elevator to be provided will be that for service. This will be a book elevator running at about 200 feet a minute.

Top floors

The top three floors are virtually unknown proportions. In other words, what we are doing is presenting a study to find out whether the proportions are right or wrong. We feel, in studying the proposed height in scale with the campus and the town, that it is a correct height for the building. Therefore, we are now merely planning structurally and mechanically for those three upper floors. They may not go on, but with the flexibility we have in connection with the construction it would be unwise not to make this provision.

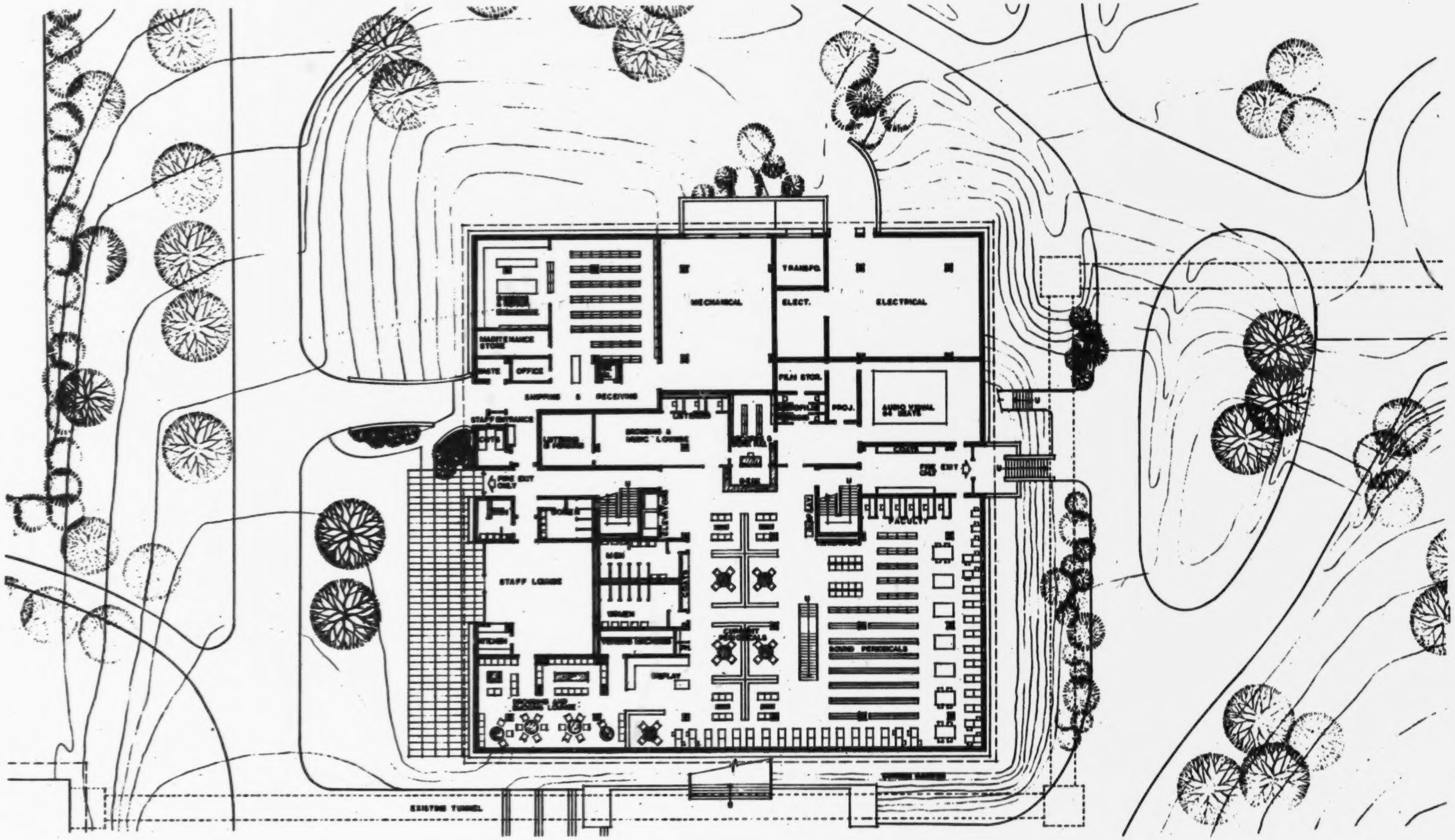
The arcades are the same on all four sides and can be approached by students from the main entrance as well as from other directions. However, the only doors which open into the library are at the front location.

The richness of the visual effect has been achieved through the modulation of space outside the library. The library is a break from the materials of other campus buildings where buff and gray and brown brick are used. The library will be a gleaming white—a dull-white type of precast concrete. It will have a copper roof maintained in browntone at both levels and, further, some local stone which is gray in color. Inside the library there will be warm colors: whites, grays, and browns. Low maintenance materials have been selected. The program has allowed 1 percent for art in the building, and this will be intimate art rather than a monumental piece of sculpture in any one location.

The buildings will have acoustical ceilings, with 9 feet from floor to floor on all but the main entrance floor, where the distance will be approximately 10 feet 6 inches. There is space above this for ductwork, and we have provided for six changes of air per hour. There is a relative humidity control, and the heating and cooling rooms for this building are remote from it, in another sectional or regional heating plant.

The electrical fixtures will provide 70 foot-candles at table level and an average of about 50 foot-candles in the stacks. The lighting will be lower in connection with the lower shelving. This will, of course, be achieved by using the same fixture but reducing it to one tube where necessary. Also, we will have telephone and intercom systems in the building.

We have selected a 27-foot square bay. The building, as I have mentioned, is square, partially from the location on the campus as a four-faced building, equal on all sides. The 27-foot square module allows 3 feet for the stack lengths and 4 feet 6 inches, center to center, for the stack spacing.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STAFF ENTRANCE
SMOKING & MUSIC LOUNGE
DESK
FIRE EXIT
FIRE EXIT ONLY
FACULTY
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DISPLAY
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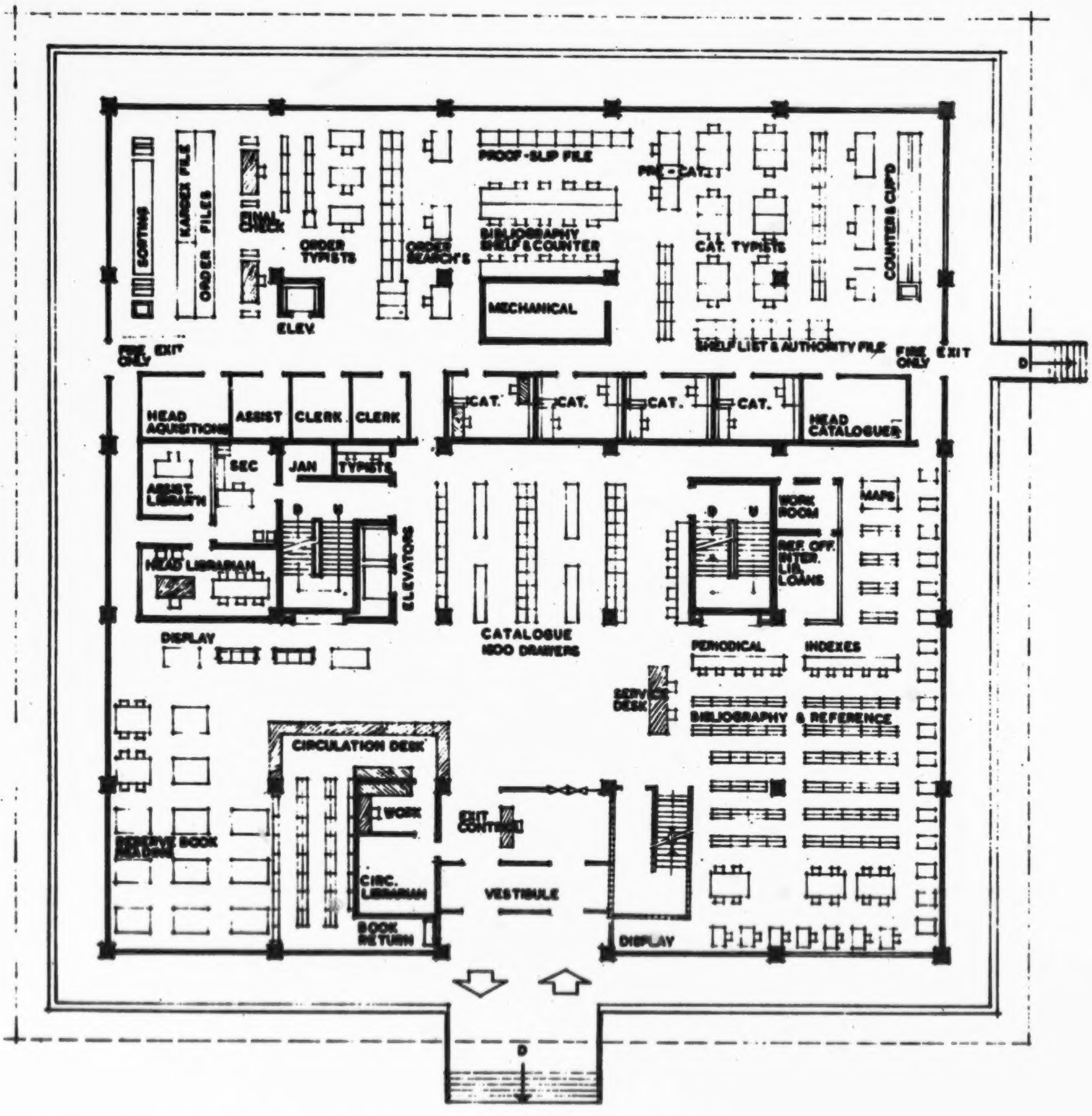
EXISTING TUNNEL

University of Waterloo Arts Library
First floor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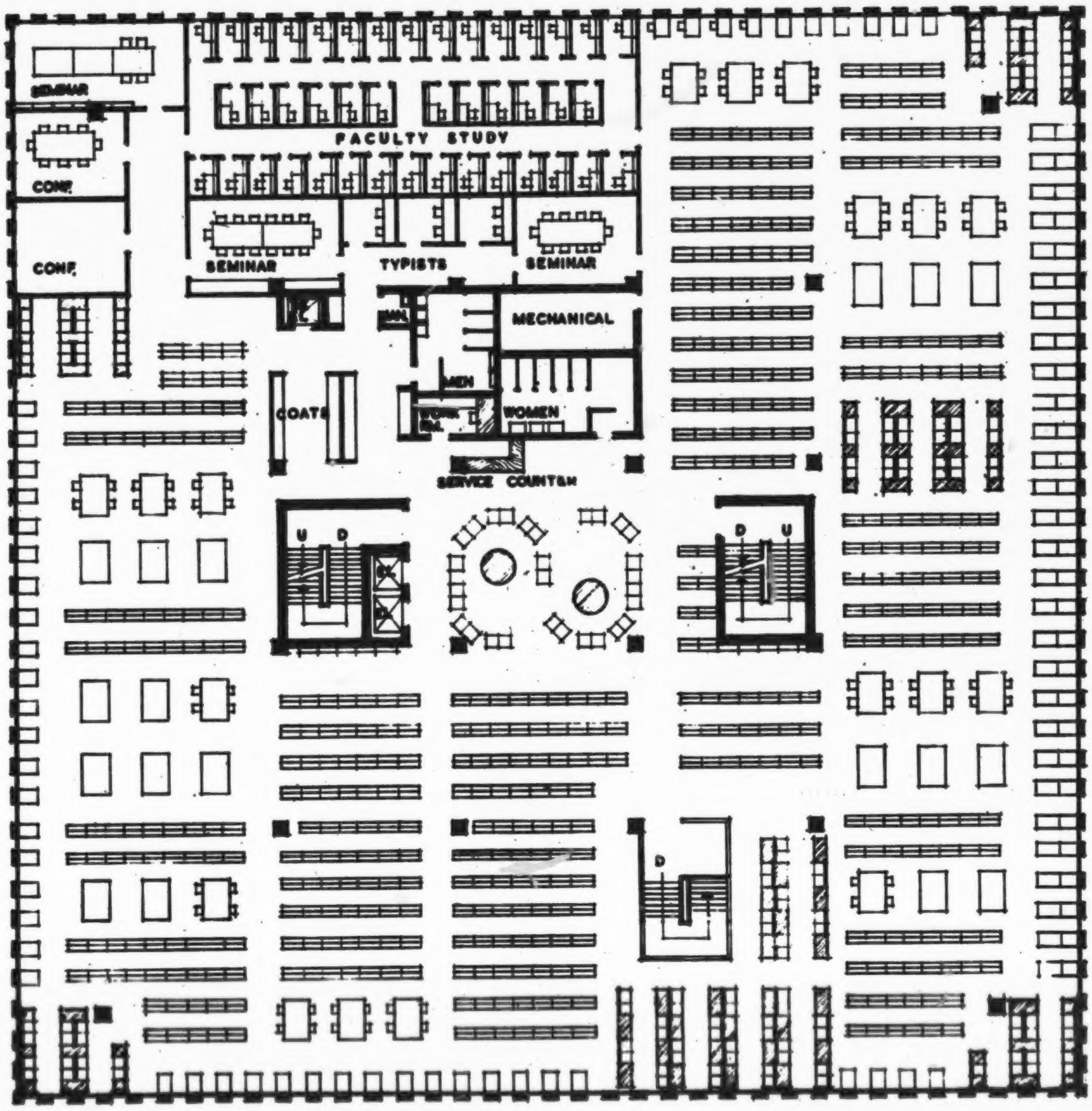
University of Waterloo Arts Library
Second floor

Both of these involve factors of 27. We are proposing to use a poured concrete flat slab construction, because this dimension has proved to be an economical one for such construction. The selection of the 27-foot module has been based on that, and also on the fact that one of the requirements of the librarian was that the study desk be 4 feet x 16 feet, and any other size than 27 would not provide economical use of the bay or adequate aisles.

MRS. DORIS E. LEWIS

I would like to emphasize that this is the arts library for the University. Two years ago a major decision was made at the University. We persuaded the science and engineering faculties to share a science and engineering library. This was a compromise since each had a small departmental library. Thus far, this compromise has worked quite well. All faculties of science and engineering work closely together, and in the case where we have a number of faculty people engaged in research, they seem to share materials required by both. We also have a very strong department of mathematics which services both those faculties, as well as the faculty of arts. Therefore, mathematics, science, and engineering materials are located in one wing of the present engineering building, which is close to the science building as well.

The arts building will contain all the materials in the social sciences and the humanities. It will also contain the library administration and the technical processes for the whole University library structure.

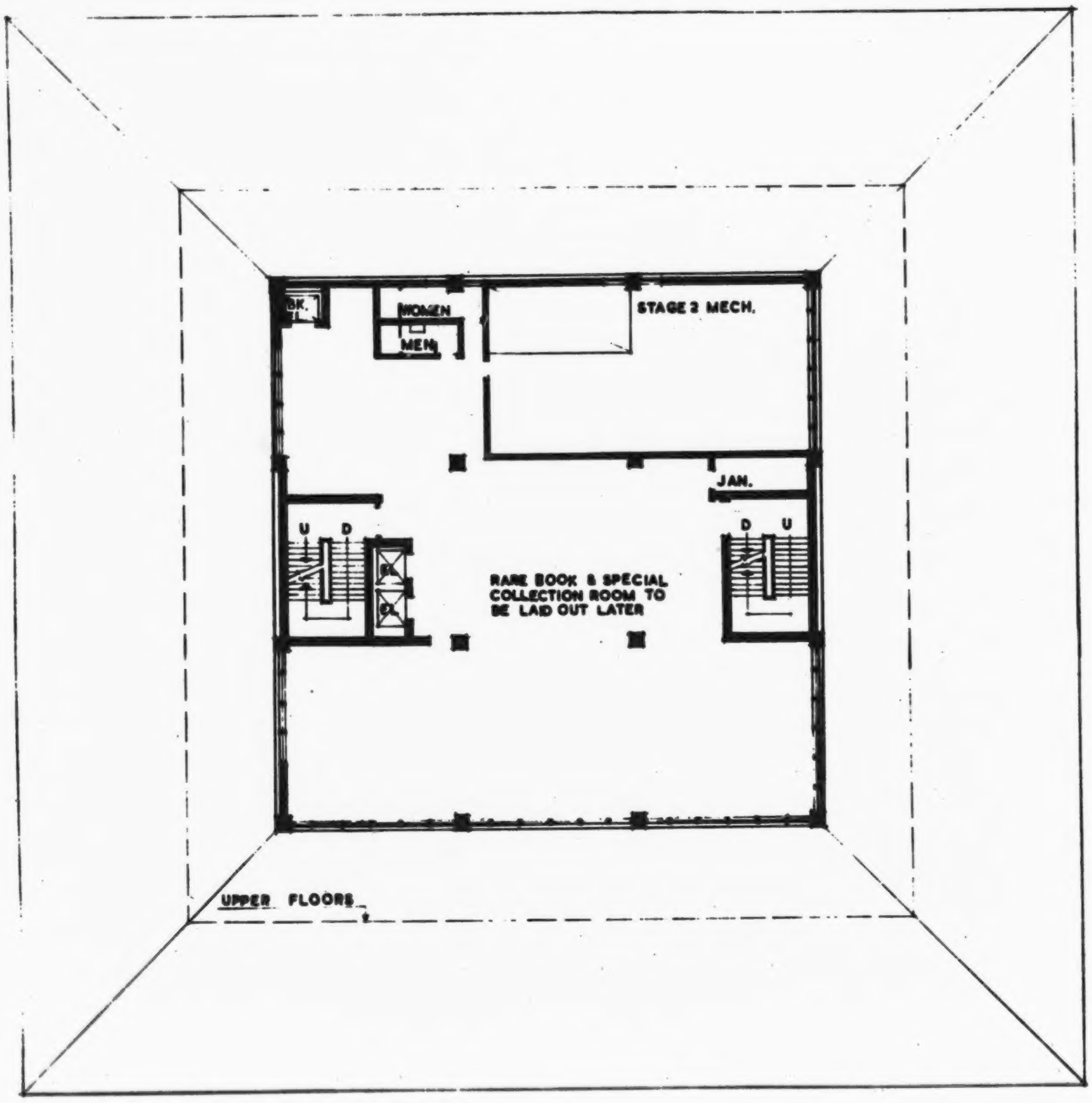


University of Waterloo Arts Library
Third floor

We feel that as the University grows, the library may tend more and more to become a research library. If the enrollment of the present University goes beyond the 6,000 anticipated for 1970 (and there is no doubt that it will do this), we think the undergraduate colleges may be established on additional land that we have gained and they will have their own undergraduate library. This present library would then tend to serve undergraduate honor students, plus graduate students and faculty. I think this possibility has somewhat influenced the design.

It is an open stack library, and I believe will continue to be so. It has not been planned for eventual closed stack. It is not at present divisional, and will not be divisional in the beginning. We feel that we are too small to set up additional divisions with the science and engineering divisions already operating separately. However, in our plans we have considered that eventually we might need a divisional arrangement. We have provided a service desk on each floor. This, we think, might very well be a reference center for those floors. The divisional materials would be arranged according to floors and also according to the Library of Congress classification.

This first plan also allows for a concentration of all periodical materials in one area. Our faculty asked for this specifically. They desired current periodicals and bound periodicals to be together. We feel we may eventually change this. Our bound articles are classified, and so we can put them in the general stack arrangements, if we want to, later on. We may also put current periodicals in divisional arrangements and then create simply a general periodicals section with a reading area associated with it. We know there are many areas in which we cannot make a final decision, but we think our planning is flexible enough to make future changes.



University of Waterloo Arts Library
Fourth floor

Main entrance

The main entrance of the library allows for a turnstile in traffic so that "out" traffic must pass the circulation desk. This circulation desk also serves as a reserve books desk. We feel there is not much point in having reserve books unless they are controlled. We do not have tremendous numbers of these, but there is shelving accommodation for up to 10,000 volumes if necessary. There are also some reading accommodations nearby, and students can, of course, take their reserve books anywhere in the library.

The display materials in the general lobby area we expect to be removable. We hope to get these materials on casters, so that if this area should become congested, displays can then be removed. The card catalog is in a central position. We hope that it will not be too far from the circulation desk and the main entrance.

The elevators are close enough to the circulation desk to do away with the need for a book conveyer at the desk. We prefer to transport our books to the stack by book truck. There is a service desk for the catalog and reference service quite close to the catalog area.

The reference office is more isolated. Here we will handle interlibrary loans. There also is room for the use of borrowed microfilms and microcards. Major accommodations for film and card readers are made elsewhere.

The office of the librarian can be moved. The walls are not permanent, although we hope they will be relatively soundproof. We may move the administrative offices up to that small fourth floor. I do not feel it is absolutely necessary that the office of the librarian be on the main floor, but I think that when we begin in this building, it is a good place for it to be.

There is a very large technical services area of 7,500 square feet. I have never talked to a head librarian who was satisfied with the size of his technical services area as his library grew. We have attempted to think far ahead. Perhaps we may have erred, but we do feel that this area, as our technical services are set up, will handle our volume, which could well be 40,000-50,000 volumes a year. At present we are handling 20,000 volumes with quite a small staff. We cherish our catalogers and our head technical or acquisitional people. We supply them with private offices. I often wonder why more libraries do not do this. I feel it very important, because I have found that we get extremely good production by giving these professional people their own offices. For your information, we have catalogers handling 5,000 titles a year—8,000 volumes. Of course, we think this is quite good and that the offices help in giving us this kind of production.

The technical services area is designed so that the material flows in a fairly even pattern from one end through to the other end without any backtracking. We work the acquisition and catalog services very closely together so that no process or searching or anything of the sort is repeated.

First floor

The first-floor level contains the receiving area, a storage area for gifts, and an unprocessed materials area. I am glad to say we do not have a great backlog at the present time. It also contains a binding preparation area. We do not do our own binding. I am sure that we will also have a multilith machine here. At the present time, our cards are reproduced by the University Press. It has three multilith machines, and our material all goes through them. We might very well have our own machine in the library.

We attempted to arrange the audio-visual area so that the service desk could serve both the audio-visual area and the periodicals area. We think this will work out.

We likewise have a lecture room which will hold 65 people. We did not desire a large lecture room but did want one where films could be shown to classes up to that size. Also, it will be used with groups coming in for instruction in use of the library, and as a projection room so that a faculty member can preview a film. We have listening and browsing accommodations and microcard and microfilm readers.

We have provided a browsing and smoking area. Perhaps we would be doing the medical profession a good turn by eliminating the smoking area. However, I am sure these patrons would then go elsewhere. I like to keep people in the library. We feel the smoking area is a concession on our part but will make everyone happy.

There are likewise on this floor a staff lounge, a small kitchen, and two rooms labeled "Cots." Our labor laws require that we have this accommodation. We also feel that it might be very helpful for library users as well as for library staff people occasionally. A faculty member might just pass out from the excitement of finding some rare gem in the library!

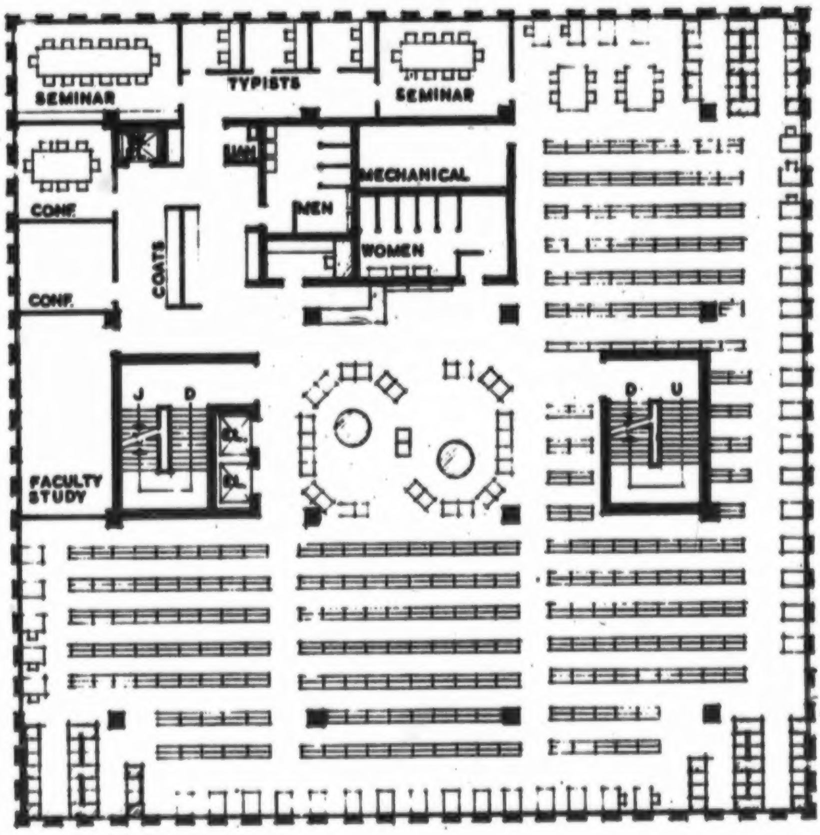
Stack areas

We have attempted to concentrate in one part of the floor plan all the areas where there have to be soundproof or permanent walls; we thus relieve the remainder of the floor for flexibility as to use. We have tried to keep our stack areas toward the center so that people will sift through the stack areas to the reading areas around the outside. We think this arrangement creates less confusion and noise. Our faculty desired a closed study with cubicles, and so we have provided one on every stack floor.

We think that, insofar as floor materials are concerned, broadloom is our best bet. We have tried it in our smaller library, and we are impressed with its durability and tremendously quiet effect. People seem to be quiet as soon as they step on it. We plan to put broadloom on our first floor and probably to have rubber tile on the rest of the floors; we feel we will have more quiet with rubber than with any other form of tile.

We plan to put our rare books and special collections on the fourth floor. We think that this will be about the right size, and we will provide a little more luxury here in the way of furnishings and

University of Waterloo Arts Library
Typical floor plan, Floors 5, 6, 7



decor. The other floors are all much the same. There are a few arrangements a bit different on one of the floors where we have conference, seminar, and faculty study space.

ARCHIE McNEAL

First of all, I would like to declare my amateur status. I have enjoyed the opportunity of looking at the plans for the University of Waterloo Arts Library. The statement of program for the library has been thoughtfully and carefully prepared. Clear and concise information is provided with regard to the functions and interrelationships desired. Projections of student population and library growth support a proposed timetable for additions.

The fact that the first floor (or basement) must be given over to space for administrative offices for a few years is unfortunate but must be accepted. Planning such space in terms of its ultimate library use lessens the discouragement, and it should always be kept in mind that this is library space.

The first floor is 156 feet 6 inches x 156 feet 6 inches. The second floor is 138 feet x 138 feet. The third floor is 164 feet x 164 feet. The fourth floor is 83 feet 6 inches x 83 feet 6 inches, while floors five, six, and seven are to be 110 feet x 110 feet. The role of a critic is not to find fault but to be constructive and helpful. It is, therefore, in that framework that these following points are raised.

Book elevator

The book elevator located adjacent to shipping and receiving on the first floor may not be intended for service to this department. If it is, it is too far removed from the circulation desk at its second-floor outlet, and its location on the third, fifth, sixth, and seventh floors is poor for service of the book collection. There may also be a need for a pneumatic tube system when the second stage of the building is undertaken.

The binding and repair area calls for a wash basin. This does not show on the plans. The browsing and smoking lounge is so located that it does not allow observation and supervision from the desk adjacent to the records workroom unless added staff are planned. Therefore, this location may need to be reconsidered.

On the second floor there is a tendency to put everything on the one floor, and this is admitted in the statement of program. This is going to be a crowded floor. Having just lived through a building plan, I recognize the desire to want to have everything there. It looks to me as if every area on it will be crowded, particularly since you are not going to have the facilities that you have proposed for the basement or first floor. It might be desirable to consider the relocation of certain areas to the third floor, one of them being the administrative offices. I do not mean the fourth floor, because I do not approve of that. After all, the rare books section is going to be there, and, as a result, you will be in too rare an atmosphere and people may not find you.

The third floor would be appropriate at this time to consider. Periodicals and current periodicals are planned for the basement, and yet you are proposing to place the periodical indexes on the second floor. I would move the periodical indexes, current periodicals, and back files to the third floor. This would then clear up a little more space for the reference reading area.

Your statement of program lists a certain amount of space and a certain number of people you want to put there, but space is not available the way it is planned. I counted the seats and the shelf space and found that you do not have the space in the reference area called for in your statement of program.

Offices

In the matter of the location of the circulation librarian's office, she is hidden and cannot see anything. I would think her office and workroom ought to be just reversed, and her office have glass around it; then she can see the operation of the circulation and control desks.

The other point with regard to office space you have already covered in what you have said about valuing your catalog librarians and cataloging staff. I think they are being overevaluated when you put each one of them into a separate office and thus make it difficult for their typists and clerical workers to get to them every time a problem arises. However, this is merely a matter of personal philosophy.

The location of the public toilets is a nonexistence on the second floor. They are called for in your statement of program, but are not in the architect's plan. They are provided in the basement; however, you have already stated that you are not going to have a basement—that is, it is going to be administrative offices. I am sure that they are planned for and will be appropriately located. But you do *not* have any provision for them on the second floor. On the third floor they would not be adequate, considering the traffic load and the number of people you will have in the building. Drinking fountains, while mentioned in the brief, do not show anywhere on the plan or drawings that I have.

DISCUSSION

Question: What is the floor height?

MR. GREER: It is 9 feet on all floors except the second floor, which will be 10 feet 6 inches cleared.

MR. FOWLER: As an architect, I have a number of observations I would like to make. One of them is a feeling that the building is going to appear too massive. It is an overwhelming structure, and it is in very strong, dramatic form. I question its sympathetic qualities with your other buildings.

I feel that perhaps to lower the building and even depress it into the ground a couple of floors, having the entrance in the middle of the building, would ease the circulation. At the same time, it would diminish this overpowering, dominant force that will be created in the center of the campus.

Secondly, and in relation to the first floor, I find no stimulating interior spaces within this building. There will be no fun, no excitement in the building. I think you saw that the new Harvard medical library was really a magnificent, stimulating, very fine architectural entity. There is no question there are certain problems in the Harvard building—minor circulation problems. But contemporary architects are giving much attention to this aesthetic quality—this feeling of space and wonderful charm. It may be criticized on a cost basis. By the same token, there are both rich and poor, and the rich, who can afford these things, should give them to us. They should allow us to go in and experience these spaces. They certainly are not going to send the money that they might have saved to other institutions. Simply because you have to cross over this area to get to the catalogs, you are also going through a wonderful environment. Therefore, it becomes a stimulating experience. It seems to me that a person is well justified by taking this devious route.

My only other point of criticism regarding the plan is that the mass entities within the building itself—the physical spaces that have been created within the building—have a tendency to be nonintegrated and articulated solely from the fact that you can move in any direction. They are not cohesively held together. I feel this, especially, on the first floor. The same thing is true on some of the other floors. I believe that these spaces can be brought within the core itself and create a much finer articulation and over-all space throughout the library itself.

Question: In relation to the 70 foot-candles lighting in the reading areas, is this a standard figure, or is it lower or higher? It seems quite high to me.

MR. GREER: It is a standard figure. The American Lighting Institute, I think, is the body which passes upon this.

Question: Is this standard the one established in the study made at the Firestone Library at Princeton?

MR. GREER: This is a basic standard on any building for reading at table level at the present time. Of course, each year it goes up and up. It used to be 50 foot-candles.

Question: I understand that this building, when constructed, will be completely air-conditioned at a cost of roughly $20 per square foot. Is that right?

MR. GREER: Yes. The central cooling equipment is not included in that price, nor is the central heating equipment.

MR. TAUBER: I want to make one observation in connection with what Dr. McNeal said with respect to the separate offices for the catalogers. This is an innovation I raised questions about, myself. Mrs. Lewis convinced me, from her experience, that separate quarters for the cataloging personnel would pay off and has paid off in production. Anytime anybody indicates this to me, then I am for it.

University of Illinois, Chicago Campus, Library

Chicago, Illinois

STATISTICAL DATA

Architect: Skidmore, Owings & Merrill, Chicago, Illinois
Type of library: Undergraduate library and office of the Instructional Resources Service
Population to be served: 9,000; ultimate, 20,000
Area: 142,000 square feet; ultimate, 500,000 square feet
Book capacity: Ultimate, 1,000,000 volumes
Seating capacity: 1,430; ultimate, 8,000
Cost: Building—$3,993,616
Cost per square foot: $26 (estimated)

PRESENTATION OF PLANS

Chairman: Frazer Poole
Librarian: Edward Heiliger
Architect: Walter A. Netsch, Jr.

FRAZER POOLE

The next two library buildings—at the University of Illinois, Chicago Campus, and the State College of Iowa — are quite different in concept. Both represent individual solutions to two different sets of requirements and conditions. Both, however, follow the same general plan of organization. The plan completely mixes books and readers. It has been variously called the *infusion* plan, the *interspersed* plan, and possibly several other names.

The infusion plan developed after World War II. However, the basic concept goes back to 1913, when N. L. Rainey developed the library at Johns Hopkins. The difficulty there was that he had to work in the context of a fixed building. You cannot develop the plan in a fixed function building; you can develop it only in a modular building with great flexibility.

EDWARD HEILIGER

There are two campuses at the University of Illinois in Chicago. There is the Chicago Professional College campus—the medical school, nursing school, and school of pharmacy—and the Chicago Undergraduate Division at Navy Pier. We will be concerned tonight with the plans for the change from Navy Pier to the new Congress Circle campus. Each campus has its own vice-president and its own senate, but is closely tied to the Urbana campus. Both libraries in Chicago are under the general direction of the Director of Libraries of the University of Illinois at Urbana.

The Chicago Undergraduate Division was organized just after the Second World War to take care of the veterans. There were about 4,500 in the first enrollment in 1946, and the enrollment has stayed at that figure, more or less, ever since. The only change in character in the enrollment through the years has been a tendency to add more and more upper division courses, although the division is still largely a lower division operation. Degrees are not granted, but the students go to Urbana to finish up their work; others of them likewise go to other universities.

Since the University was founded about a century ago, there has been talk of establishing a full-fledged state university in Chicago. However, it was not until this branch was established at Navy Pier that talk became really serious. Five years ago a bond issue was passed which provided money for a new building, and $50,000,000 of the bond issue was set aside to establish the new campus. The library staff felt strongly that it should have something new and different in the way of university libraries.

Data processing

One new approach was the use of data processing. Therefore, for the past five years under Ford Foundation grants we have spent a great deal of time and money computing, on a computer basis system, information for a new library. This is going into effect on the new campus. Our research is now at the stage where we feel that we can have it ready for the new campus.

Policy has been set for completely centralized library services. We had to go all the way to the president of the University to get this decision. It was quite a fight. The arrangement now is that there will be no more than any one faculty department which will have bookshelving. I do not know how well this will work out, but at least we are getting started. The buildings will all be close together, and we will have computer-produced catalogs in each faculty department. We plan to have, in effect, delivery service from the central library, so that a professor can look into a nearby catalog and call for certain materials to be sent to him. They will be sent promptly. We feel that this arrangement may help in keeping a trend toward the departmentalized library from developing too rapidly.

Another interesting feature of the building is the Office of Instructional Resources. The library has been involved for years in closed-circuit television work and in audio-visual work for language teaching, listening to music, and so on in connection with program learning. When the decision had to be made as to where to put these facilities on the new campus, it was decided that they should go into the library building. None of us liked it, but the more we thought about the library as being part of a communications center, the more we favored the idea. We could see possibilities of using the facilities, planned for closed-circuit television broadcasts from the Urbana and the Chicago campuses, for transmission of computer data and perhaps of photographic materials brought in for microstorage from a distant center. We decided we could make considerable use of some of the facilities.

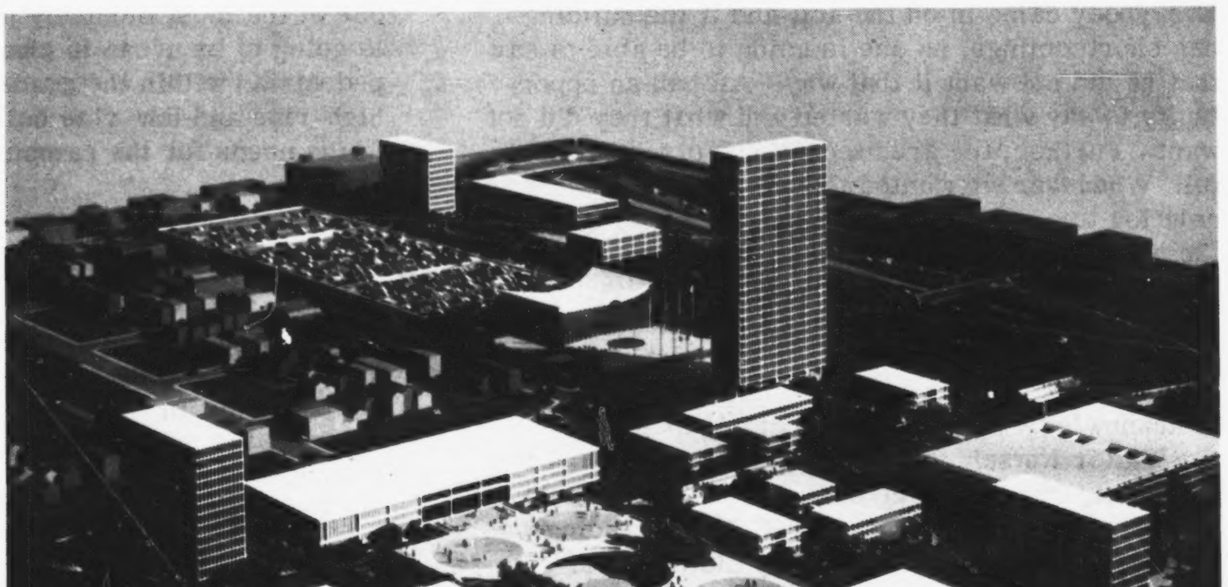
Therefore, we have provided for an Office of Instructional Resources in the library. This has created some special problems, particularly an exit control. However, we think we have that solved likewise.

Building features

One of the features of the library building is the size of the building bays. They are 30 feet x 45 feet. I wanted to call them modules, but I was corrected and told to identify them as building bays.

Books will be arranged in classification order in the first phase of the building. The first phase is

University of Illinois, Chicago Campus
Model of campus



Hedrich-Blessing (Skidmore, Owings & Merrill, Architects) not going to last long, perhaps only two years. Mr. Netsch will be pointing out to you how this schedule affected some of the decisions the architect had to make. The building will be air-conditioned.

We failed to get acoustical floor covering, but I am still hopeful we may have it sometime. I have seen the building that Skidmore did out at Colorado College and I liked the carpet. There carpeting has been used effectively. The maintenance has proved so inexpensive that the cost of the carpeting is more than taken care of. However, our taxpayers did not like carpeting; they considered it a luxury, and it was decided that we would not have it.

There are two main facts which I want to mention. One of them has to do with the importance of the library staff participating in library planning. Everybody came in on the act, and if the building has shortcomings, no one is going to be able to say that he did not want it that way. All had an opportunity to say what they wanted and what they did not want. Further, the architects were extremely helpful. Whenever we wanted to have a staff meeting in relation to a particular problem, we would call them, and they always sent someone from their staff over to work with us. We also received considerable help from the University of Illinois staff at Urbana and from the Library Technology Project of the American Library Association. I would like to acknowledge our thanks to both of them.

Walter Netsch, who will explain the work of the architect, was in charge of the planning for the Air Force Academy. The Grinnell College building was the work of his team. Also, they did the John Crerar Library, Skokie Public Library, and Colorado College Library, and now they are working on the new Northwestern University Library and the Yale Rare Book Library.

WALTER A. NETSCH, JR.

Navy Pier, which had been in operation since World War II, involved a decision to build a new library and new campus. This meant a complex situation in terms of site selection and final development of a site in the total master plan.

The key points I wish to discuss are the relationship of the building to the master plan; the problem of expansion flexibility of a campus of 9,000 students which is to increase to 20,000 students within possibly eight years; and the introduction of the Office of Institutional Resources into the library as a program. I also wish to consider the relationship of automation to the future of the library; the problem of entrance flexibility on a large campus; the book-reader relationship within the library proper; and the concept of a library in terms of three-dimensional shape rather than in planned sections. I likewise want to comment on the transition of this library from a commuter, undergraduate campus to a graduate campus, and the use of structural materials in the total visual concept of the University.

The University of Illinois, Chicago Campus, at Congress Circle will contain, when it is complete, 20,000 undergraduate students and 3,000 graduate students on an urban site of 106 acres, with parking for 6,000 automobiles. The library originally will be 150,000 square feet; later it will expand more than 200 percent to 450,000 square feet. We are talking in terms of planning for an immediate and a future situation. We are at the confluence of all the major expressways in the Chicago area. Further, we will have mass rapid transit to the city as well as automotive transportation.

With this complex of buildings, together with the provision for 20,000 students, the campus will be one of the most intensely populated in America. It is going to be urban in character and completely pedestrian within the academic area. It will include high-rise and low-rise buildings which will relate to the needs for the campus.

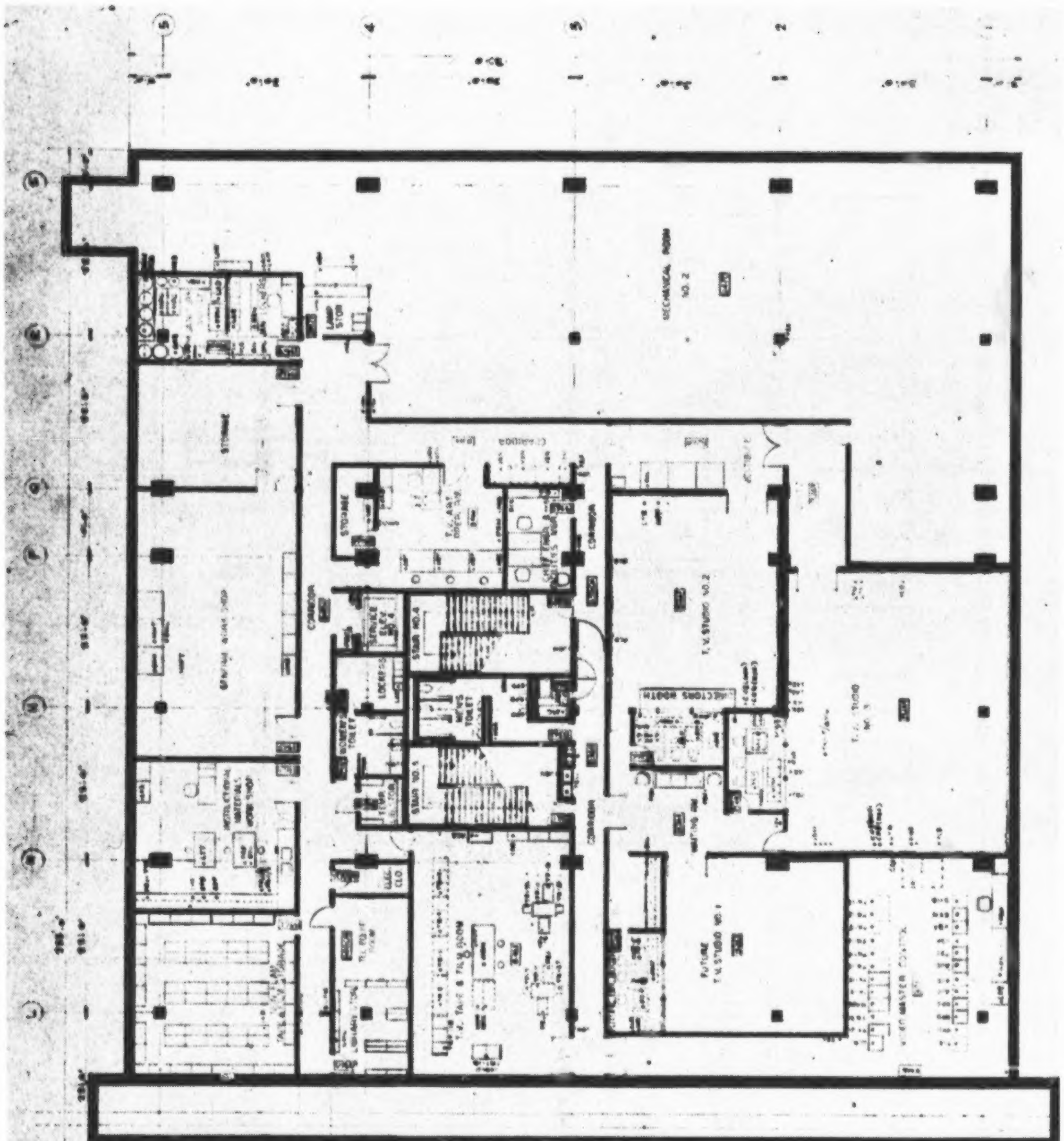
Center planning

Everyone would like to be in the center of the campus, and everyone feels that the most important facility is the academic training of his particular environment. This is, in many respects, a justifiable position. In order to resolve this problem, we attempted to see how many areas we could get into the center.

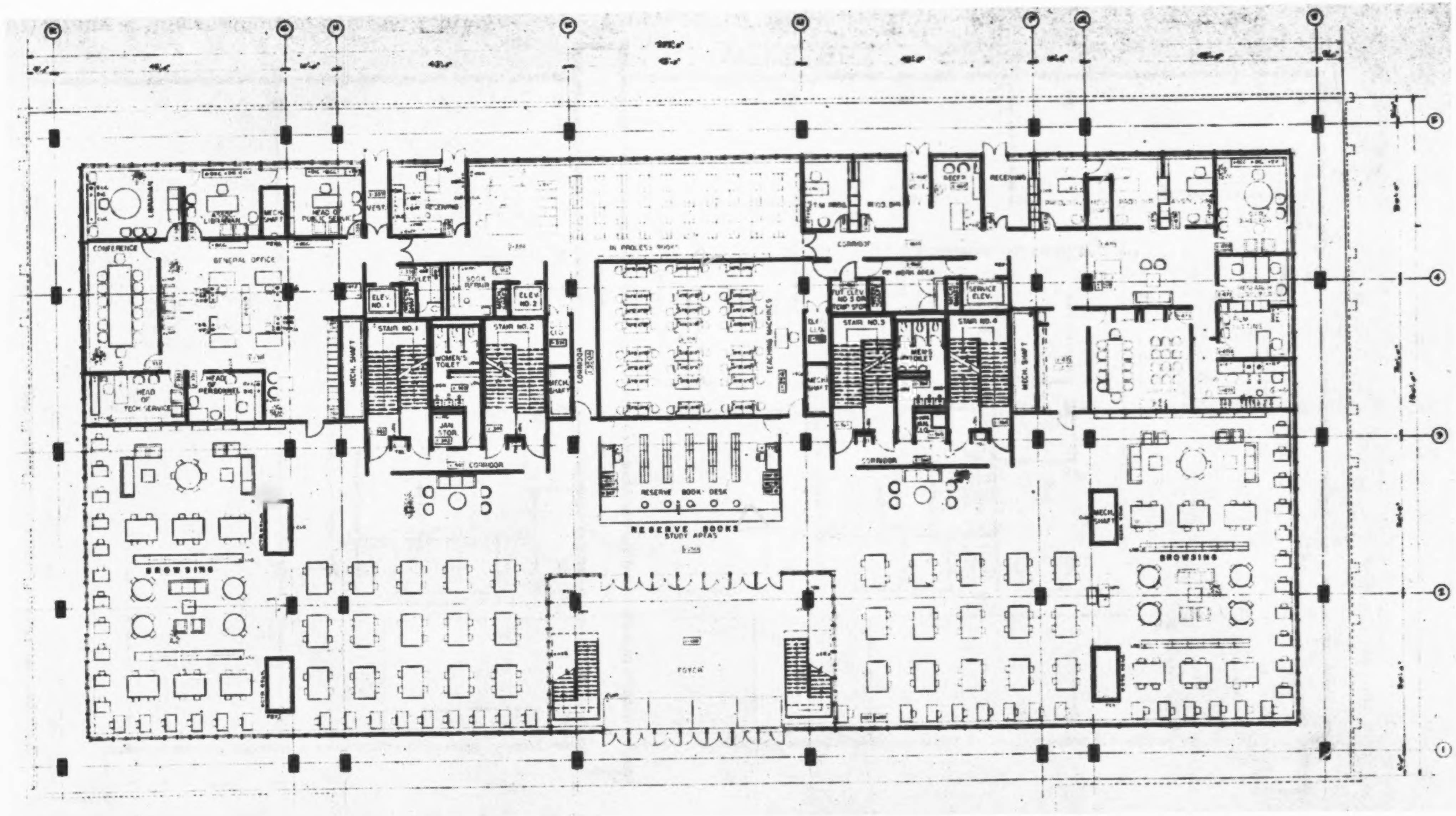
We had, to begin with, a very complex urban situation and a site of 106 acres interspersed with streets. Not all streets could be removed. Those that could be removed could not have the utilities beneath removed. Therefore, there was a network of streets that would be retained, and streets that would be closed but not made completely unusable.

The large parking lot will contain 3,000 automobiles. It is located immediately off the expressway in order to keep the cars out of the community. Another large parking area also will contain provisions for 3,000 cars. Both cross streets. Therefore, a system was devised for raised walkways, or ramps, to get people to the second level over the streets. Most of our buildings can be entered from the first or second floors and will have an automatic, natural flow of traffic. This leads to special problems in the library, but provides a unique opportunity to make use of the areas about the center of the campus.

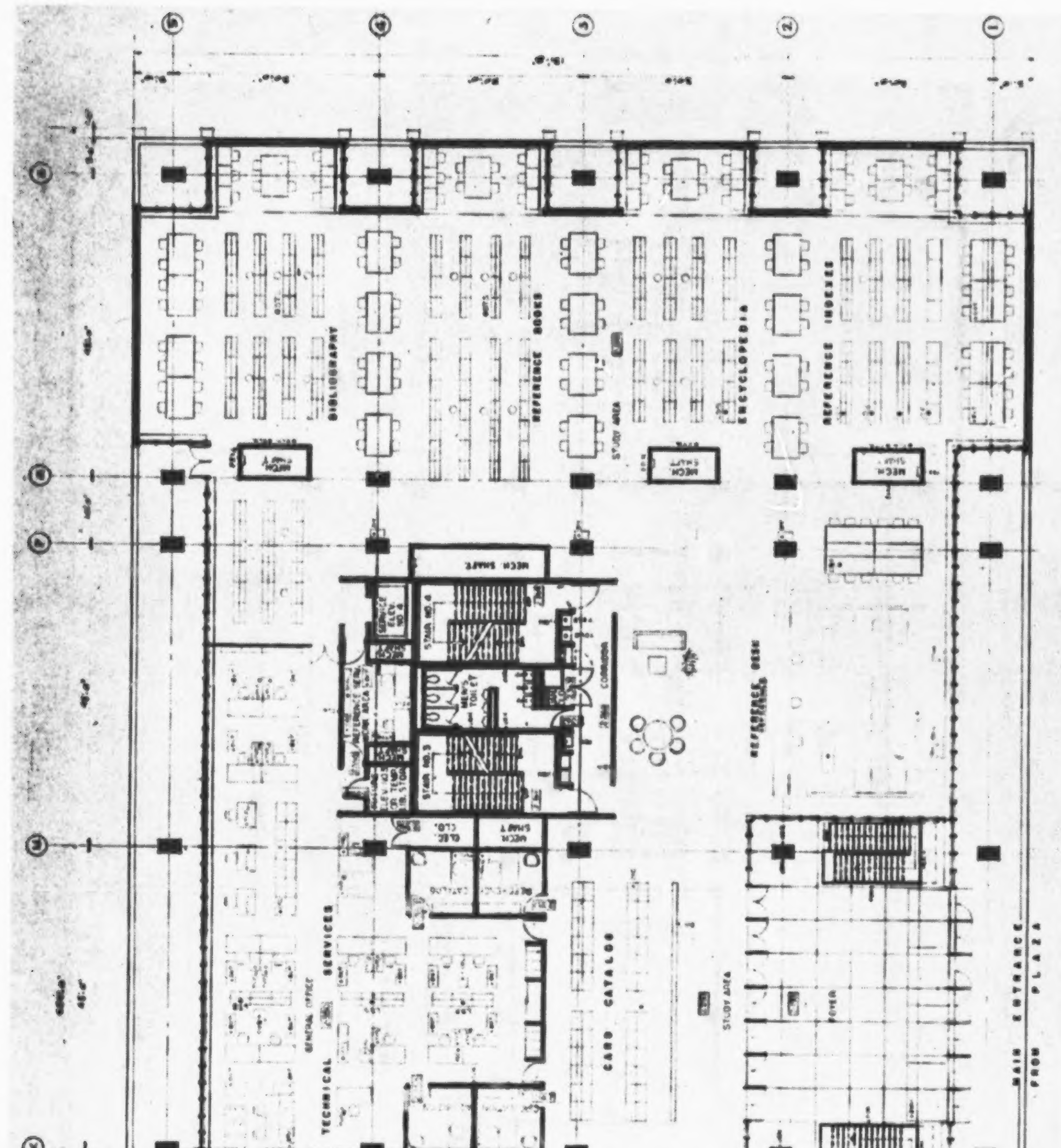
There are five circular areas and a large public cross street connected to the two raised walkways. The walkways come from the parking lot below and from the mass transit facilities above. In the center of the area is the lecture center. This contains facilities for 5,000 students. It also contains 26 different kinds of lecture rooms. Immediately surrounding these are the classrooms.


MECHANICAL ROOM NO. 2
T.V. STUDIO NO. 2
FUTURE T.V. STUDIO NO. 1
STAFF LOUNGE
ARCHIVES
MECHANICAL ROOM NO. 1

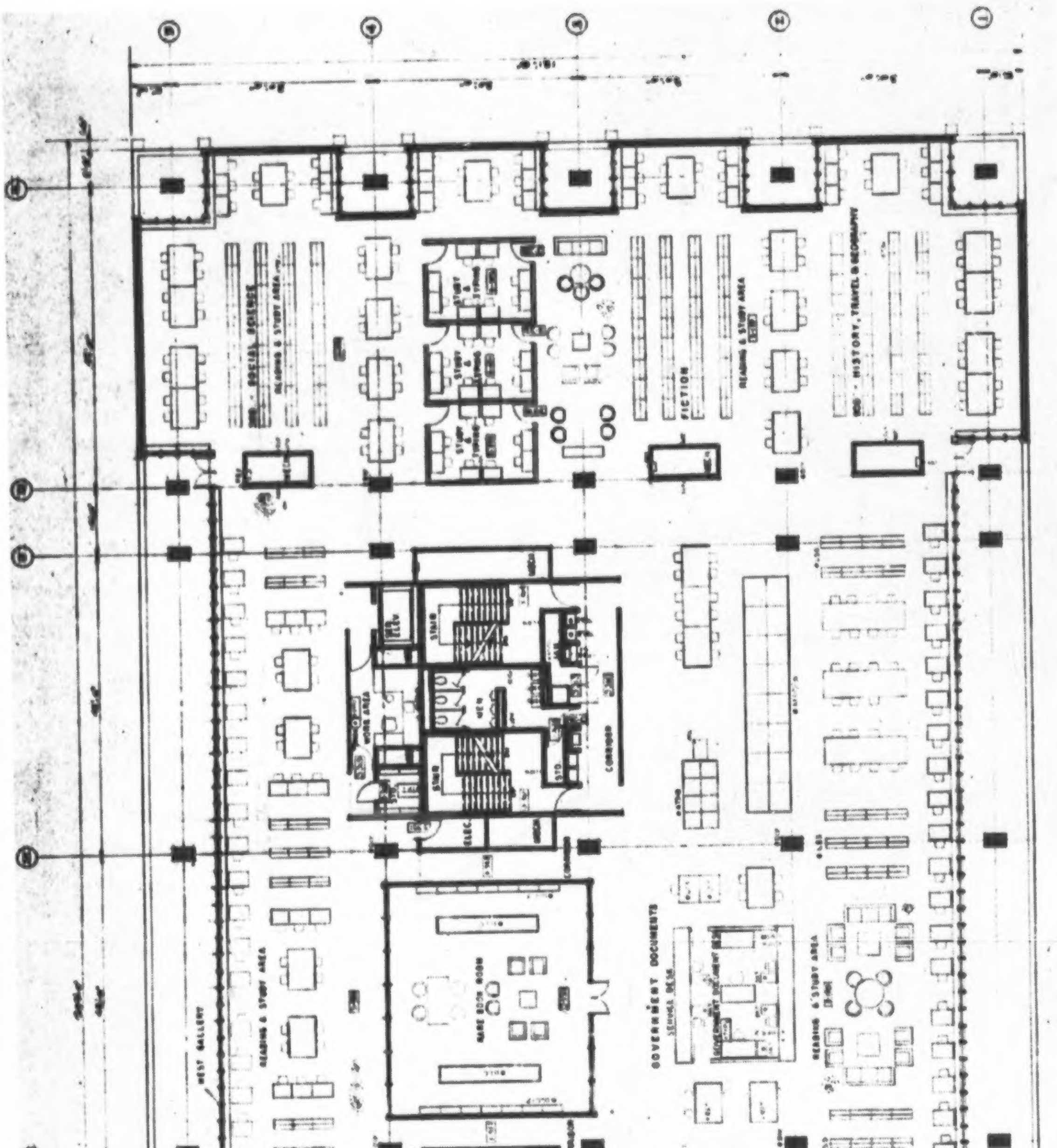
University of Illinois, Chicago Campus, Library
Basement


LIBRARIAN
ASST. LIBRARIAN
MECH. SHAFT
HEAD OF PUBLIC SERVICE
VEST.
RECEIVING
CONFERENCE
GENERAL OFFICE
HEAD OF TECH SERVICE
HEAD OF PERSONNEL
ELEV. NO. 1
TOILET
BOOK REPAIR
ELEV. NO. 2
STAIR NO. 1
WOMEN'S TOILET
STAIR NO. 2
JAN. STOR.
CORRIDOR
IN PROCESS BOOKS
TEACHING MACHINES
RESERVE BOOK DESK
RESERVE BOOKS
STUDY AREAS
FOYER
CORRIDOR
STAIR NO. 3
MEN'S TOILET
STAIR NO. 4
SERVICE ELEV.
BROWSING
BROWSING
MECH. SHAFT

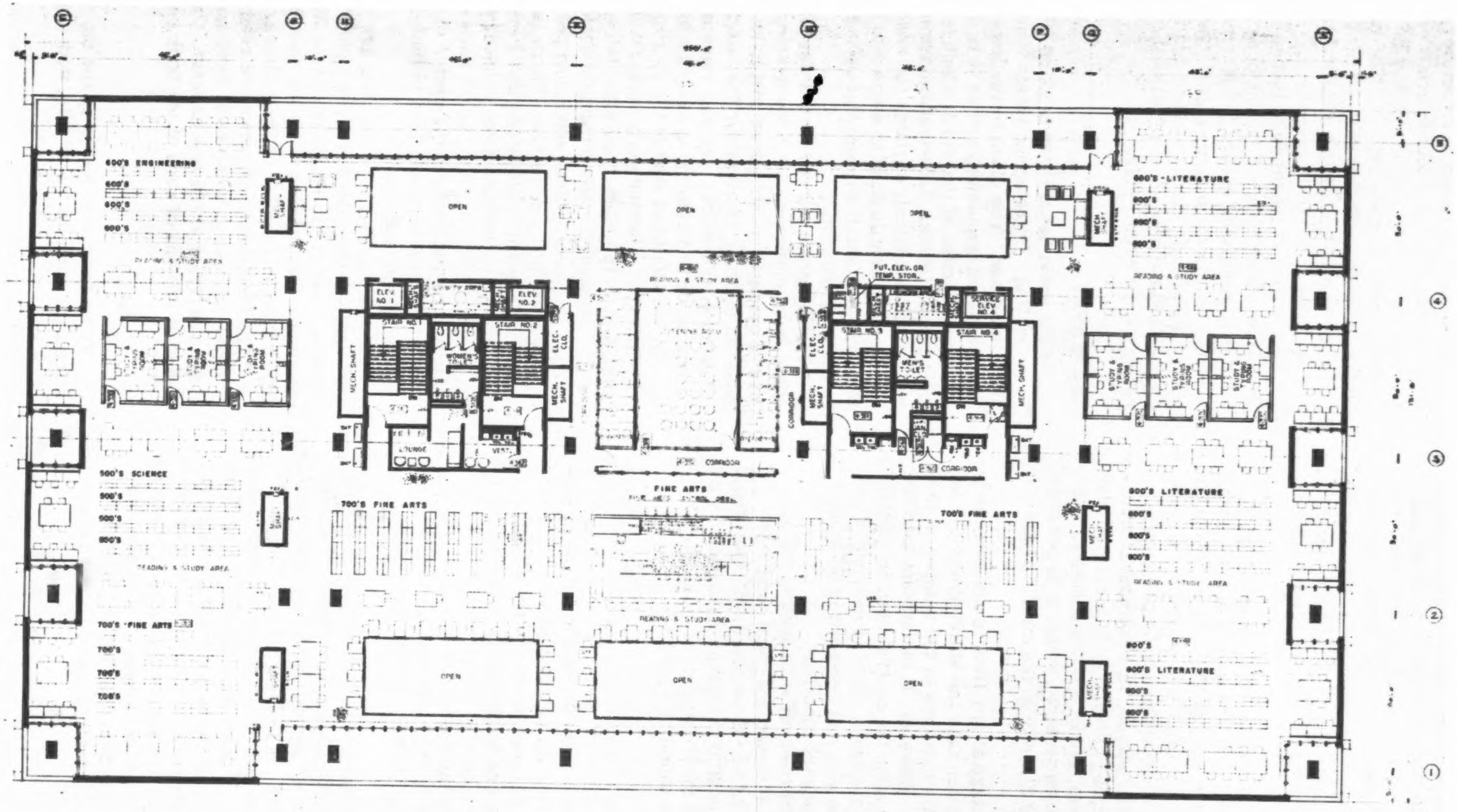
University of Illinois, Chicago Campus, Library
First floor


BIBLIOGRAPHY
REFERENCE BOOKS
ENCYCLOPEDIA
REFERENCE INDEXES
STUDY AREA
MECH SHAFT
STAIR NO. 4
STAIR NO. 3
STAIR NO. 2
STAIR NO. 1
ELEV NO. 1
ELEV NO. 2
CORRIDOR
REFERENCE DESK
TECHNICAL SERVICES
GENERAL OFFICE
CARD CATALOG
FOYER
MAIN ENTRANCE FROM PLAZA
CIRCULATION DESK
BOUND PERIODICALS
CURRENT UNBOUND PERIODICALS
NEW MATERIALS LOUNGE

University of Illinois, Chicago Campus, Library
Second floor


000 - GENERAL WORKS
100 - PHILOSOPHY & PSYCHOLOGY
200 - RELIGION
READING & STUDY AREA
300 - SOCIAL SCIENCE
FICTION
900 - HISTORY, TRAVEL & GEOGRAPHY
GOVERNMENT DOCUMENTS
RARE BOOK ROOM
WEST GALLERY
STAIR
CORRIDOR

University of Illinois, Chicago Campus, Library
Third floor


600'S ENGINEERING
600'S
600'S
600'S
READING & STUDY AREA
MECH. SHAFT
OPEN
OPEN
OPEN
READING & STUDY AREA
FUT. ELEV. OR TEMP. STOR.
600'S - LITERATURE
800'S
800'S
800'S
READING & STUDY AREA
ELEV NO 1
ELEV NO.2
STAIR NO.1
STAIR NO.2
WOMEN'S TOILET
MECH. SHAFT
ELEC. CLO.
LOUNGE
VEST.
CORRIDOR
ELEC. CLO.
STAIR NO.3
STAIR NO.4
MEN'S TOILET
SERVICE ELEV NO.4
CORRIDOR
CORRIDOR
STUDY & TYPING ROOM
500'S SCIENCE
500'S
500'S
500'S
READING & STUDY AREA
700'S FINE ARTS
FINE ARTS
700'S FINE ARTS
800'S LITERATURE
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University of Illinois, Chicago Campus, Library
Fourth floor

The center focus includes the campus access to the library, the student center, the lecture rooms, and the classrooms. Farther out are the laboratories, which have a longer use time for the student. The high-rise building has a seminar classroom arrangement with faculty offices and will eventually be primarily the humanities and the college administration building.

The concept of the campus and the position of the library are very much like a drop of water, with the greatest amount of energy invested in the center. It contains the lecture center and movement of people to and fro. This has expanded the principle—which was first really started in commercial structures, such as shopping centers—into a campus plan. From the lower level, where 5,000 students can be housed in various-size lecture rooms, it is possible to enter the library directly in the middle of the center bottom bay.

If the library usage at any time is not extremely heavy, the students can take the stairways to the left and right to the main entrance of the campus at the raised plaza level. However, if the student load for the University is heavy, the control area immediately on the inside can be opened. This is one way of allowing for the expansion and contraction of student use in relation to library functions.

While we are starting off with seating for approximately 1,500 students, we could expand to serve as many as 8,000. If we had 8,000, that would be 40 percent of the 20,000 student population. With this much usage of the library, it is quite obvious that both entrances would be required.

Internal planning

The lower ground level of the library is the initial phase for the undergraduate campus and is primarily an area of reserve books for the students. The reserve books are immediately on the inside of the vestibule. They control the moving in and about the campus. From the reserve books area, you can move to the left or to the right; you then have an area of browsing on the far left bay and also on the far right bay.

The important thing is that immediately behind the reserve books control are the offices of the Instructional Resources Service—the teaching-machine research study area. It is there that access by the students can be handled by the reserve reading desk. We have a control situation that allows this particular area to be involved in the total library activity.

Two cores represent the vertical services for the building. There are future specialized elevators for servicing the technical areas. There are four major stair wells for servicing all of the areas inside the library. Centrally located between them are laboratories.

Rather than to create a structural area that was based on the 3 feet x 4 feet 6 inches or 3 feet x 4 feet 2 inches, we tried to achieve a bay large enough to create a more flexible system. The bays now are 30 feet x 45 feet. The double columns have provisions for expansion joints for future construction of the ultimate 500,000 square feet.

Let us look at the 20,000-student campus from the raised walkway level. If one does not enter from the lower area around the lecture rooms, one would come in over a large plaza. This allows 10,000 students to circulate back and forth between classes and permits them to enter the library directly off the raised plaza.

Use of glass

In the lower level there is glass from the floor to the ceiling. In the upper levels there is considerably less glass. The glass in the lower level has an 11 percent transmission, and so it is not glass in the normal sense of the word, which has a 90 percent light transmission. Low-transmission glass permits greater control, obviates the need for Venetian blinds, and permits light to come into the building, thus allowing small expanses of open space to count in the environment.

The catalog area is about 20 feet from the immediate front entrance. With the development of the use of automation, this area will have to be replanned in order to allow for the telephone-book type of catalog. Therefore, we will eventually have here a relocation and reforming of space and equipment.

On the left-hand side of the entrance is the circulation desk. Immediately adjacent to the vestibule, and on the right-hand side, is the reference desk. Adjacent to the circulation desk are new materials and also current and bound periodicals, bibliographies, and references. There is an immediate feed to the vertical elevators that I mentioned earlier. The technical services connect with the card catalog. Obviously, then, we do have a drop of water situation immediately in the center of the plan, in which technical services feed to bibliography, cataloging, and periodicals.

On the outside of the building are windows at a 90° angle to the outside wall, which form small spaces. One of the major problems here was the attempt to reestablish more intimate scales within the large environment of the building.

The distribution of books and readers relates to current number of volumes at hand and estimated future arrivals at the new campus. Carrels are infused at one end of each of the book sections.

Floor plans

From the center we go up the stairs and see the rare book room in the middle, with a glass display inside. Nearby is a desk control for government documents. This area extends to two inside working spaces or typing rooms adjacent to the vertical circulation. On the right, we start with the social sciences and continue into fiction, history, travel, and geography. Interspersed are carrels and reading areas adjacent to windows for informal readers. This plan permits expansion capability doubling the size of the building by 200 percent in three directions.

The fourth floor is merely a continuation of readers, books, and the general collection. Here are engineering, science, and the fine arts. The fine arts are serviced by a control desk which not only controls the fine arts program but is closely related to the recordings area. Again, there are group study rooms and typing rooms to the left and the right of the vertical cores, and an infusion of readers and books in the literary category.

The six large wells are two-story spaces surrounded by individual carrels. We found out that one of the most exciting places to study was one of three-dimensional space and, further, that readers like to be private. Outside the third and fourth floors, we have reader balconies which can be used by the students in good weather. They likewise act as a 10-foot overhead, protecting the glass in all cases.

The basement contains the television studios and workshops for the Instructional Resources Service. It also contains rooms for automatic equipment and the library staff.

The materials in the building are brick, textured concrete—both sandblast and poured form—and aluminum windows which contain a ground glass with a low light-transmission factor. The windows are not at the edge of the building but are perpendicular to it.

The large column and double girders expand the ceiling to 12 feet. There are really waves of ceilings, some 9 feet and some 12 feet. This is to prevent a feeling of oppression from a constantly low ceiling. Fluorescent lighting is installed in the ceiling.

DISCUSSION

Question: Have you considered the elimination of two entrances?

MR. NETSCH: We have essentially one entrance. We have an optional entrance for the time when we have 8,000 students; it is adjacent to reserve reading, which is essentially—in the long-range plan—the undergraduate library. The upper three floors are to be primarily the upper division and graduate area. This connection in the vestibule permits, if the lower entrances are closed, a walking-up to the second floor. Therefore, essentially, we have the option of a single or a double entrance, depending on the demands of the campus. I think that if we attempted to get 8,000 students out of one entrance, it would be a disaster.

Question: What are your story heights from floor to floor?

MR. NETSCH: The story heights are 12 feet for the entire structure plus 10 inches—about 13 feet.

Question: Are there any cost data available?

MR. NETSCH: The library is costing about $26 a square foot, including the basic core area which has been planned for the larger library. We had the interesting problem of planning a small library that we knew would get large. We had to integrate into some of the first phase the ultimate technical services of the latter. Therefore, it is really hard to evaluate, in terms of a building like this, just what the actual foot cost is as of the moment.

Question: Do you know the percentage of assigned area to total gross area?

MR. NETSCH: I could not give you that number broken down specifically. Do you mean technical services opposed to research space, and so on?

Question: The total assigned area as compared to the total usable area.

MR. NETSCH: It is about 27 percent.

Question: How many people will the building sit at any one time?

MR. NETSCH: At this phase, about 1,500.

Question: I did not get a clear picture as to how you plan to expand. Would you comment on that again, please?

MR. NETSCH: We can expand the building in three directions by simply extending the bays. It can extend 90 feet south, 90 feet north, and 90 feet west.

Question: Not vertically?

MR. NETSCH: Not at the top. In the future most of the reader-book arrangements will be in the larger, unencumbered area, back of the core and extending farther left, right, and to the top.

Question: Did you consider vertical expansion?

MR. NETSCH: Yes, we did. In fact, the whole campus was designed that way, and we went through a study on building the whole campus into one building. It had skip-floor escalators, would occupy about 15 acres, and be 25 stories high. Later on, after further discussion, we went to the present plan.

Question: Did you design the mechanical services for the ultimate building or just the present one?

MR. NETSCH: The plans are rectangles that subdivide. In other words, the typical core is not all in the middle of the building. It is distributed throughout and helps define the bays. Thus the cores serve only the lineal systems, and there will have to be additional vertical risers.

Question: What type of heating system does this building contain?

MR. NETSCH: The campus has a chilled-water system from a central area. There are no penthouses on the building, and we have fan units only. We do not have air conditioning.

Question: Is the entire building lighted with luminous ceilings?

MR. NETSCH: There are some special areas, but essentially the illumination is 75 foot-candles throughout. The University of Illinois gave us three criteria: it wanted to develop a ceiling in which the lights could be replaced without removing the horizontal cover; it wanted to develop a building that would eliminate Venetian blinds because of the cleaning problem; and it was attempting to develop as many techniques for low upkeep as possible. That is really why we lost out on our carpet. We could not prove that you could carpet a floor more economically than you could do it the other way. In connection with the lighting techniques, we have a special light fixture which has a hung effect. The serviceman can reach up and in and change the light fixture without removing the cover.

Question: What was the thinking on the creation of wells?

MR. NETSCH: These wells are there for two reasons. One of them is to give added perimeter for the double exposure on the two floors. Also, they are a gamble on the fact that the librarians will make up their minds to need more space and one or two will be roofed in before you are finished.

Question: The costs that you gave were based on the general contract and did not include furniture and equipment—is that right?

MR. NETSCH: That is right. I do not have a figure on the furnishings and equipment. For example, since the carrels in a single row were too long, we are going to break them up. There are also certain other items we want to do some research on—different kinds of carrels and different kinds of seating for the commuter student. These are in the process of discussion and development with Remington Rand, who has the primary responsibility for the equipment for the building. I believe that Mr. Heiliger would like to add some points that I undoubtedly overlooked.

MR. HEILIGER: There are conduits built in around the whole building for a teletracer service or system, so that when someone comes into the library and expects a call, he can take with him a little instrument which will buzz if he is wanted at any time. We do not have the cost of the equipment approved as yet, but we do have the conduits built in, and we can install the equipment if we receive the money for it.

The approximate figure for the total construction cost is about $4,000,000, and if I were to hazard a guess on equipment, it would be maybe $500,000 or somewhat less than that.

State College of Iowa Library

Cedar Falls, Iowa

STATISTICAL DATA

Architect: Thorson, Brom, Broshar, Waterloo, Iowa
Type of library: College
Population to be served: 4,950
Area: 92,500
Book capacity: 300,000 volumes
Seating capacity: 1,100 (estimated)
Cost:
  Building: $1,355,147
  Equipment: $175,000-$200,000 (estimated)
Cost per square foot: $14.68 (construction cost)

PRESENTATION OF PLANS

Librarian: Donald O. Rod
Architect: Oswald H. Thorson

DONALD O. ROD

We are a college with an enrollment of about 5,000 students. This is more than double what it was nine years ago. We are expecting upwards of 8,000 students by 1970 and perhaps 10,000 by the middle seventies. We offer an undergraduate program, both teaching and nonteaching, a master's degree, and the degree of a six-year specialist in education.

Our library has increased in the last ten years from just under 70,000 volumes to 312,000 volumes for the current year. The collections number more than 200,000, and we are growing at the rate of about 10,000 volumes annually. We receive 1,300 periodicals and have around 5,500-6,000 reels of microfilm.

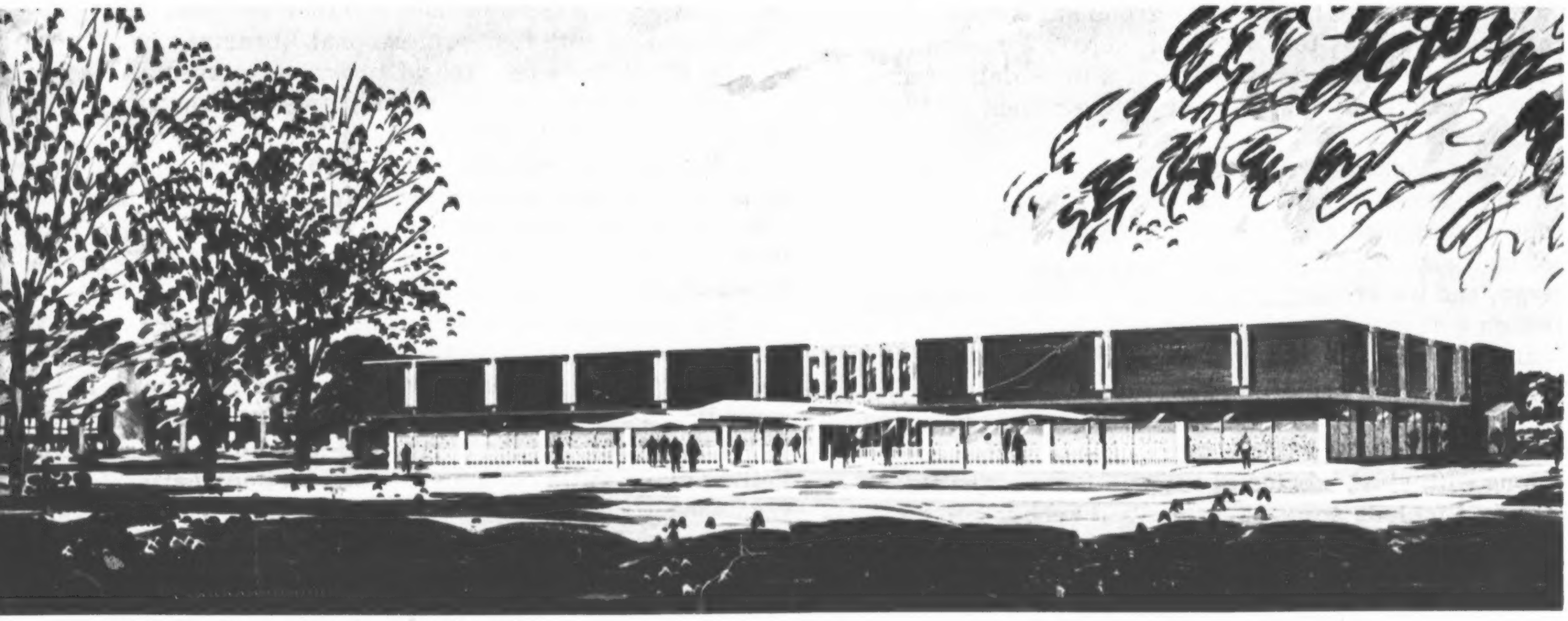
Our building planning began about 1959, although when I went to the institution in 1953, one of my first jobs was to preempt a part of the campus for a future library building. The building was to be built in units. In 1961, $1,500,000 was appropriated by the legislature for unit number one of the new building. Of course, $1,500,000 is a lot of money to us. Construction was begun on the first unit in October, 1962, and will be completed between April and June of 1964.

When we began planning, we set up several committees. There was a faculty committee which operated early in an advisory capacity. I likewise had a student committee formed simply to answer a few specific questions. However, the administration turned the whole responsibility for planning the building over to me, and I had a free hand.

We had numerous meetings before we developed our program, and throughout the planning and the consulting with the architects I had two young men on the staff—Mr. Howell, the coordinator of public services, and Mr. Alford, coordinator for the technical services—working with me. They were a good sounding board and made real contributions to the planning.

Mr. Thorson and I, as well as the director of the physical plant, made trips to several libraries, and then another member of this architectural firm attended the Kent Institute with me. The firm had never planned a library, but it was a marvelous firm to work with. The architects were open-minded. Further, they were located only six minutes away from my office. I suppose I had at least fifty interviews with them. They did not cram any-

State College of Iowa Library
Architect's rendering



Thorson, Brom, Broshar, Architects

thing down our throats. If the building is a well-designed one, it is to their credit.

The library building is oriented toward the east. It is a three-story building with a total of 92,500 square feet. The contracts—general, mechanical, electrical, and elevator, exclusive of furniture and architect's fees—came to $1,355,000, and in turn resulted in a square foot cost of $14.68. Mr. Thorson will point out some of these costs and also emphasize that they should not be charged against the building for various reasons. This being the case, the square foot cost would then be somewhat under $14.

Building plans

We will have seating for 1,100 students; this will include at least 400 (and we hope 500) individual carrels. We are planning a total of 275,000-300,000 volumes in this unit. There are three levels, one being below ground but with windows on two sides because of the creation of a partial moat. The middle level is the main level and is reached by a bridge which crosses the moat. The upper level overhangs 4 feet, thus giving protection from direct sunlight to the main level.

There are no windows on the west side since this is a temporary wall. There has been a very judicious use of windows, not in any sense for light but mainly for psychological reasons. On the top level, there is only one narrow window in the middle of the wall of each bay.

The building is modular. The distance between columns is 25½ feet in both directions, with more than a 24-foot clearance between the columns. The building is constructed mainly of red Roman brick, with precast concrete panels below the windows on the main level.

There are 12 individual studies, approximately 6 feet x 9 feet. There are 11 group study rooms, approximately 8½ feet x 14 feet, separate rooms for micromaterials and newspapers, a browsing room, and 14 individual and 4 double typing rooms.

The building is completely air-conditioned with a double duct system, the air coming out through the light fixtures. There is Thermopane glass throughout—a darkened glass, eliminating some of the glare of sunlight. The light fixtures are of the recess type, and we are using polarized fluorescent lighting which will maintain an intensity of about 60 foot-candles. The ceilings will be fiber glass acoustical tile.

There will be an extensive use of walnut paneling on the columns and in the walls of the various rooms, along with vinyl fabrics of various sorts. The flooring will include some carpeting and rubber tile on the main level, and on the other two levels, vinyl asbestos tile.

Library location

To the east and to the south of the library are classroom and administration buildings. To the west and to the north are the residence halls. The library is in a very strategic, central location. We have plenty of room to expand to the west. We also have a multibuilding with footings and columns to support a fourth level; in fact, the roof of this unit is a poured concrete floor.

The building is approximately 234 feet wide and 127 feet deep. In other words, that is 9 bays wide and 5 bays deep, 45 bays on each level. Besides the ample space for extension to the west, there is a nice park around the entire area.

What we wanted was a good place to study and an attractive building. Also, we wanted to orient people, after they entered the building, and disperse them immediately to the various floors. Almost all of the staff are on the main level.

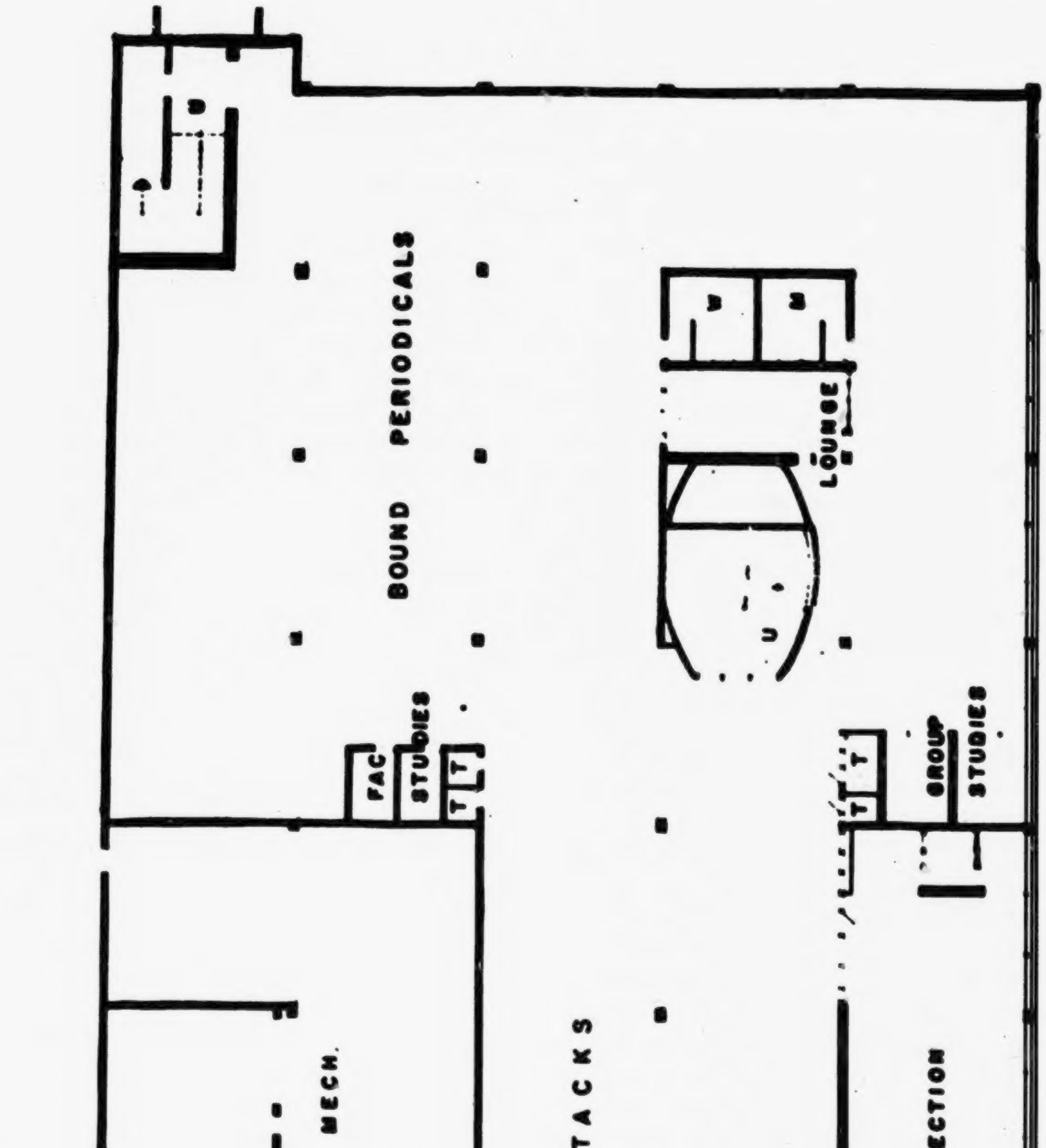
When you reach the lobby, you have a number of possibilities. If you turn to the right, you will find a browsing room which will have a collection of 2,000-3,000 volumes. Farther on down, you will find the rest rooms and the lounge back of the stair well. The same will be true of each floor.

The stair well is an example of how the architects and the library staff resolved a major problem. The architects wanted to put in a circular staircase, but we did not. They exercised their ingenuity with an elliptical staircase. On the landing will be hung a piece of metal sculpture which one of our artists on the campus has been commissioned to create. The sum of $7,500, or one half of 1 percent of the budgeted amount, has been set aside for original art works to be included in the building.

To return to the lobby, the student has the option of going straight ahead into the readers service area, where the reference and periodicals collections will be housed. This readers service complex is simply an extension of the reference service. It will be staffed with four professional librarians, who will be generalists but also will have some specialization in the social sciences, fine arts, and the humanities. Each will have a private office. The service desk will be outside. The staff here are not going to be simply reference librarians; they will be responsible for analyzing and building the book collections. The reference collection will be shelved on standard, freestanding shelving.

The micromaterials room will contain cabinets for upward of 10,000 reels of film and a number of readers. Two typing rooms there each will contain a reading machine plus a typewriter. The current newspaper room, to the north, will have floor-to-ceiling glass walls on two sides and be informally furnished.

Near the readers service complex will be an area for recordings. We expect to have about 2,000-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STACKS
YOUTH COLLECTION
CLASSROOMS
LIBRARY SCIENCE DEPT
STAFF LOUNGE
ARCHIVES

State College of Iowa Library
Lower floor

3,000 recordings when we open the building. The listening facilities will consist only of earphones. When we build the first unit to the west, we will then expand the facilities. Also on this floor are three groups of study rooms and a number of typing rooms.

Circulation desk

To return again to the lobby, after the student enters the building, to the left will be the main circulation desk. Here also will be the check-out point for the exit. We will have this set up so that there can be three lanes of traffic at the heaviest times. We have, at the present, about 3,000 students a day coming into our library. We expect that when we open this building, we will have about 5,000. We are not talking about a great flood of students, and for quite some time these three traffic lanes will take care of any exit problems.

Back of the circulation desk we have reserve books in a temporary location for the next few years. However, we are expecting to ask the legislature for another $1,000,000 two years from now to add unit number two. The card catalog is opposite the reserve books and the circulation desk, and to the left of that will be the bibliography center, serving both the public and technical services.

We have one elevator which will be used primarily as a staff elevator. We feel that if students have to go up one floor or down one floor they can walk, but for the older faculty members and students who may not be able to use the stairs, the elevator will be available. It is located between the technical services area and the circulation desk area. We have a very small rare books complex, and this will double as a room for committee meetings and so on.

We are initiating a central serials record room which projects into the technical services area. It has been planned to keep the doors in the technical services area locked. However, there will be a door open to the public areas so that research patrons or students can still come in. We have a bank of 28-tray cardex units. We are going to have a microphone telephone in the room so that when a request comes in from the readers service desk or some other part of the building, the person on duty can walk over to the end of the room, get the answer to the question, and carry on a conversation through the amplifier telephone. The ceiling heights of the building are roughly about 9 feet 5 inches, or 9½ feet.

Upper level

The bulk of our book collection will be on the upper level. We are planning an arrangement whereby we will intersperse books and readers. The periphery of the floor is lined with individual carrels. You will remember that this floor projects 4 feet from the lower level, and so we have space for carrels all around the outside. We hope to seat upward of 500 or so students on this floor.

There are 6 group study rooms and a complex of special rooms and facilities. The rest room and the lounge are behind and near the stair well. We have a room for graduate students, more typing rooms, and a bank of 10 faculty studies. The one at the front of the stair well is designed with a glass front for any professional person we may need on this floor. We are hoping that we do not need any supervision or service on this floor, but we are hedging and planning for this possibility, nevertheless.

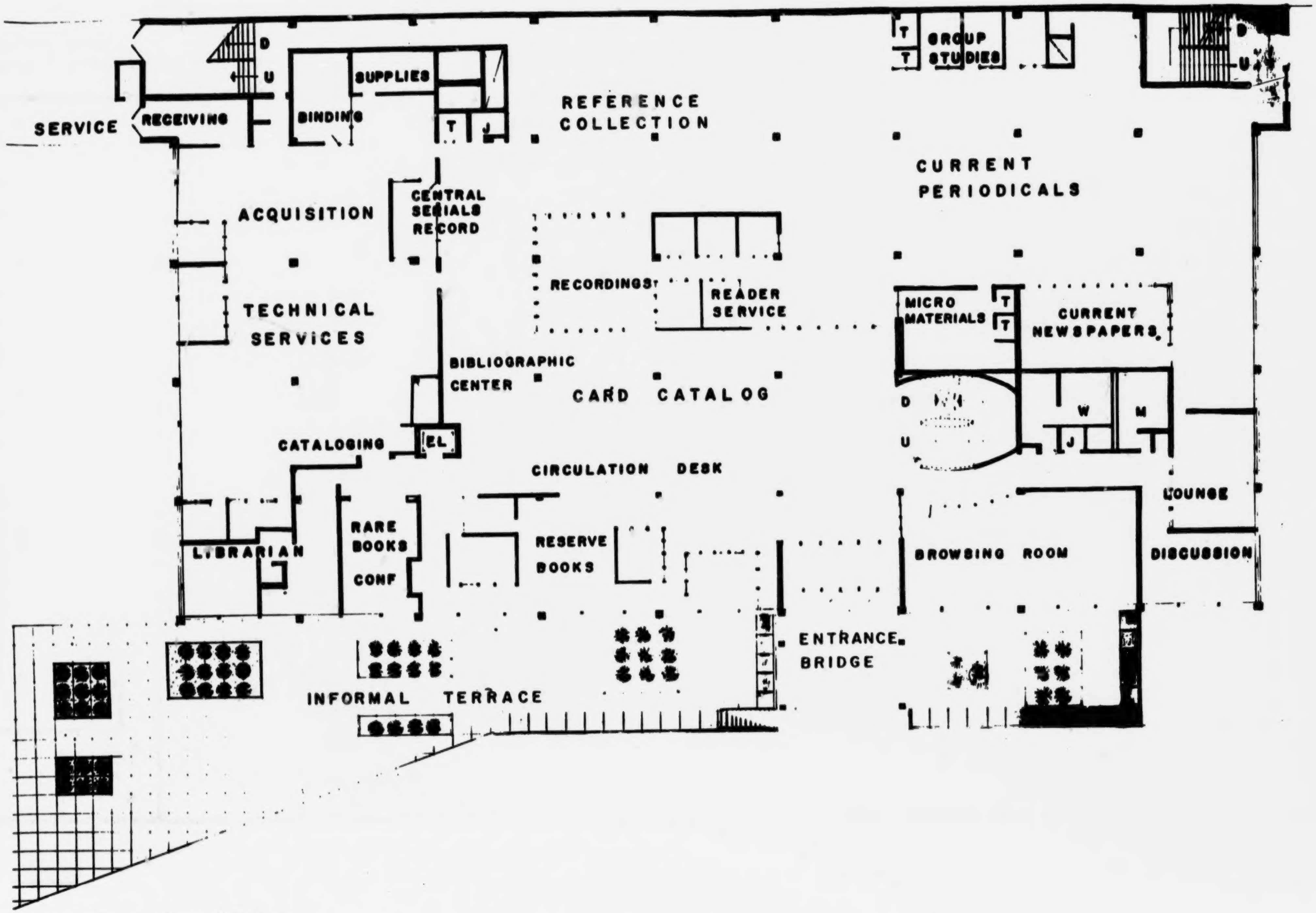
Lower level

On the lower-level floor we will have mainly our bound periodicals, probably the 0-100's. We want the first sections of the 0-100's here because we want the volumes adjacent to the undergraduate library science program in this building. On this floor we also have 2 faculty studies, some more typing rooms, and 2 group study rooms.

We have a special complex of books called "youth selection," which is a model school library. The model collection of about 12,000 volumes serves the library science department, the education department, and the methods courses in all of the subject areas.

Between the classroom and the youth complex we have a room which will have a triple purpose. It will serve as a second library science classroom, a room where the youth collection librarian can meet with groups of students to explain the collection, or as an open room for individual study. We also have a small room for the archives and an area for archive material. This is a facility that is just beginning; we hope it will grow as the years go on and, as it does, it will be moved elsewhere. We have a staff lounge which is approximately 16 feet x 24 feet, with a full kitchenette unit. We have an excellent telephone intercom system developed, and we expect to get it installed as soon as practical.

We have auxiliary staircases, which do not lead to the outside. We have emergency exit locks on them and a system for the opening of these locks that is controlled through the main circulation desk. We have had very little trouble with our students in our present building. Of course, at the beginning of the summer sessions we do have students who, once in a while, simply and ignorantly walk through these doors. However, thus far they have caused relatively little trouble, and we think that this system will work out. In the final analysis, these doors are provided in compliance with the regulations of the fire marshal.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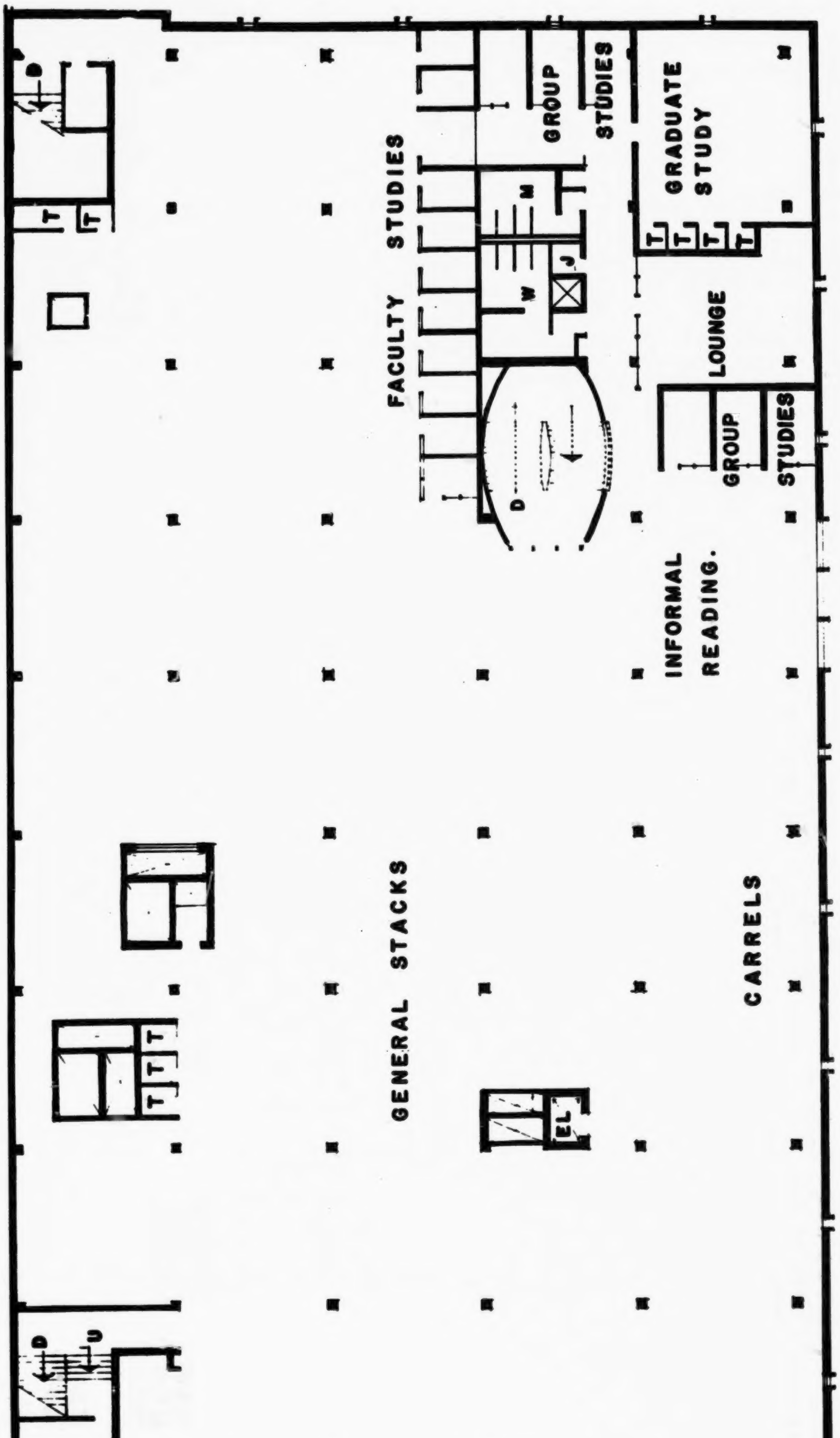
BROWSING ROOM
DISCUSSION
ENTRANCE BRIDGE
INFORMAL TERRACE

State College of Iowa Library
First floor


FACULTY STUDIES
GROUP STUDIES
GRADUATE STUDY
LOUNGE
GROUP STUDIES
INFORMAL READING.
GENERAL STACKS
CARRELS
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State College of Iowa Library
Second floor

OSWALD H. THORSON

If you become involved in the building process, you should realize that the program you present to your architect is extremely important. If you develop a good program, it is going to save the architect a tremendous amount of time. We urge that you first develop a well-written and well-verbalized program. In this situation we were fortunate to have one.

On this campus we had a hodgepodge of buildings constructed all the way from 1860 to 1940 and, as a result, we had to design something that would be in harmony. This was a question that we discussed at great length with the administration, and we finally decided that all materials we used would be harmonious. There are some architects who feel that their building should be the model of the year and of the century, and they do not take into cognizance any of the surrounding factors.

In the cost of $14.68 per square foot there were a number of items involved which were really not part of the library itself. We had, for instance, the heavy roof construction, which would provide for another floor. This amounted to $25,000, or about 29¢ a square foot for the over-all cost of the building. We also had a heating duct problem, which meant that we had to run the heat drop below the floor of the building. This, on the basis of bids received, amounted to 40¢ a square foot. These special items ran the cost to over $14. There was also the service drive, which is actually not part of the library. Putting all of the pertinent figures together, we arrived at the cost of $13.50 per square foot, with which we were very pleased.

DISCUSSION

Question: What is your vertical story height?

MR. THORSON: About 12 feet. The finished ceiling is about 9 feet 4 inches; it is a luminous ceiling with fluorescent lights. The lighting costs $25,000 for the building, which amounts to about 40¢ a square foot for the entire area. We were using polarized lighting in only 80 percent of the area, and this broader use in effect raised the cost per square foot. We spent a great deal of time investigating the matter of lighting and tried a number of different mockups and fixtures. We went to a number of different manufacturers, and then our mechanical engineer and librarian themselves worked on this at quite some length.

We started out with a series that ran all the way from 50 to 70 foot-candles. We were very much concerned with the foot-candle illumination that we would receive on the bottom row of the stack. This we felt was a critical problem. We are now up to about 60 foot-candles of polarized light, and the experts to whom we talked have stated that 60 foot-candles of polarized light is fully equal to or perhaps better than 90 foot-candles of unpolarized light. The number of watts is the same either way, and so your heat gain, which is always the problem in the library in connection with air-conditioning and power costs, is about the same. However, we do feel we are getting considerably more eye comfort.

Question: You leave me with the impression that you have endeavored to put too much on the first floor, thus giving it a cluttered appearance. Have you thought about moving acquisitions on the ground floor?

MR. ROD: This was one of our real problems. We used a flannel board to start with in order to indicate the areas we wanted adjacent to each other. We wanted to get all we could on this floor for obvious reasons. If I could have had one more bay each way, the problem would have been a little easier. However, we think we achieved what we desired. We have adequate space in the technical services for at lease half a dozen years, and by moving the wall out and then extending it somewhat to the west, we think we have a good solution for the future. We may have to move the reserve books section out.

Question: With the modules at 25½ feet, how would you space your double ranges? Normally we think in terms of centering them at 6½ feet and 4½ feet. How would you center yours in order to use up a 25½-foot module?

MR. ROD: We are going to intersperse the reading areas and we will pick up the excess space there. Let's say that we use 3-foot aisles (we certainly are not going to use anything else). We are convinced that we are going to continue with the 36 inches, at least for a while. Also, the reference collection may require a little more space.

Question: Are you concerned about the reader space here? Would you say you had sufficient seating for 1,100?

MR. ROD: We would like to have much more seating space. I might add that I had requested $2,000,000 to serve a student body of 4,500. Well, the committee on the campus cut this down to $1,700,000, and then the governor chopped out another $200,000. Actually, we were getting about 96,000 square feet out of $2,000,000, and through the ingenuity of the architects we realized 92,500 square feet out of $1,500,000. Remember, we are planning immediate expansion. We are never going to realize this fabulous 40 percent seating, and I am not convinced it is absolutely essential. I would like to have our percentage higher and, when we add the next unit, a much higher percentage will go for seating. We have a rather large number of residents. I believe we had about 4,500 during the past year, and there will be about 5,000 next year.

There will be 4000-4200 full-time equivalent, and we have from 60 to 70 percent of our students housed on the campus.

Question: Have you made any provisions for smoking?

MR. ROD: We are allowing smoking in the lounges. This is one of the questions we put to the student committee. The students felt that if we provided adequate lounges on each floor, they would much prefer this. When unit number two is built, I have a feeling that we will probably create larger areas for smoking. However, it was the committee's strong feeling (and most of the students on the committee were smokers) that it preferred smoking segregated.

Question: What percent of this seating is in carrels?

MR. ROD: We would like to move eventually toward about 80 percent. However, the reason we are not providing a higher percentage in this first unit is that we have a good deal of equipment that we have to take from our present building. Some are tables seating six and four. We are using this equipment, expect to add to it, and will come out with probably 400-500 stations or carrels.

Question: I was quite surprised at the number of typing rooms you have. Are you providing the typewriters? Are you having metered typing?

MR. ROD: About half of these rooms, or slightly less than that, will have rental typewriters in them. The number of typing stations also surprised us a bit, but the way that typing is increasing in libraries influenced our decision. If we have overshot the mark, we will cut down that much more in unit number two. I might also add that some of these typewriters will be used from time to time for readers with blind students.

Question: Do you require any special acoustical equipment?

MR. ROD: We are working on special arrangements for the sake of the typist.

Question: I wonder why you put your newspapers into a separate room?

MR. ROD: Mainly because newspapers are a headache. They are noisy, messy, and cluttery. We have a separate newspaper room now which we like, and we have continued it in the new building.

Question: You indicated a $9\frac{1}{2}$-foot ceiling. Why?

MR. THORSON: To give us just enough clearance above the stack height. If we had less, we were afraid it would be too small. We did have trouble getting our double duct system into the ring space. The construction system is a typical 7-inch flat slab with drop panels, and there are taper caps on the columns. Therefore, we have a minimum construction thickness. With this size we are able to run our ducts through and, at the same time, hold to a good size and get by the mechanical engineering.

MR. ROD: I would like to say that if the architect had pushed that ceiling down much lower, I would have objected. I have visited probably forty or fifty libraries during the past three years, and whenever a ceiling gets down below 9 feet I feel that it is pressing down on me, especially in large areas. I have been in libraries with less than an 8-foot ceiling and I do not like it, and I think that people in general do not like it. We discussed this rather carefully and we indicated that the height should generally be around the 9-foot mark. There are a few places where there is some ductwork and the ceiling does come down to 8 feet—small areas, I believe.

Question: What are you going to do with the old library building?

MR. ROD: That building is probably the most magnificent building on the campus. It is fifty-five years old. If the architect will forgive me, I would like to say that I would not be surprised if it will be standing after the new building drops. It has tremendously high ceilings. It did not seem advisable to add to it for a library, and so we sold the board of regents and the state legislature on the idea of using it for classrooms.

Question: Going back to the price per square foot, I agree that you received some excellent bids in connection with your $14 per square foot cost. I remember that the University of Illinois quoted $26 per square foot and Waterloo quoted $20 per square foot. Was your figure of $14 a square foot due to the brick you purchased or some other economy in connection with building materials?

MR. ROD: No. I think we came up with this figure simply because we had a lot to do and rather limited funds to do it with. I might add that the architect assures me that the building is properly designed.

MR. THORSON: I can add something in relation to the cost. We are in an area where we do not have high union scales. The operator or general contractor is a so-called union operator, but he operates with nonunion local help. Only the skilled trades are unionized. We had a big argument because of the fact that the mechanical contractor was not union, and for a while the job was picketed. However, the situation finally was resolved. I think that in the more rural areas of the United States we can get lower costs than you can in a place such as Chicago.

Musselman Library

Bluffton College
Bluffton, Ohio

STATISTICAL DATA

Architect: T. P. McLaughlin & J. J. Keil, Lima, Ohio
Type of library: Liberal arts college
Population to be served: 600
Area: 19,112 square feet
Book capacity: 150,000 volumes
Seating capacity: 216
Cost:
  Building: $275,000
  Equipment: $21,023
Cost per square foot: $14.38 (construction cost)

PRESENTATION OF PLANS

Librarian: Delbert Gratz
Library Committee Chairman: Howard Rade
Consultant: Donald Thompson
Architect: William Wells
Critic: Donald Davidson, Librarian, Santa Barbara College Library, University of California, Goleta, California

DELBERT GRATZ

The building program that now will be presented is quite different from any presented previously. You had to shift gears from a large $5,000,000 project down to $1,250,000 yesterday, but now you must really slow 'way down to a fraction of this—the $275,000 we have to spend.

Bluffton College was established in 1900 to provide for the education of young people in the Mennonite Church. Today it is supported by the churches of the central and eastern districts of the General Conference Mennonite Church. Although the college is a Mennonite institution, from the very beginning it has been open to all worthy students irrespective of sex, color, or church affiliation. For the first years it was primarily an academy. By 1950 the first baccalaureate degrees were conferred.

Bluffton is a village of 2,500 persons located in northwestern Ohio. The enrollment has increased by about 10 percent for each of the past five years. During the past year the enrollment was 500. Planning for the college development has been based on a maximum enrollment of 600 students.

There are eight major buildings on the wooded campus of forty acres. It is a liberal arts college accredited in 1953 by the North Central Association. For the first thirty years of the college's existence the library was located in College Hall, which also housed the classrooms and administrative offices. The Musselman Library was erected and equipped during 1929-30 for $60,600. The money was a gift from Mr. and Mrs. C. H. Musselman, of Musselman apple-butter fame.

The library is a two-story building in the colonial style of architecture, constructed of brick with entrance portals, keystones, and trimmings laid in Georgia marble. It was planned by Miss Edna Hanley (now Mrs. N. E. Byers, librarian of Agnes Scott College), who was the librarian at the time. Mrs. Byers did a marvelous job in planning the library. Thomas McLaughlin and Associates of Lima, Ohio, were the architects. The reading room on the second floor has a seating capacity for 110 readers. The three-tier bookstack was built to house 30,000 volumes. More than 35,000 volumes now strain its capacity. Additional seating is needed since the reading room is filled to capacity many evenings.

Old building retained

The college decided to retain the old building because of its good condition, excellent location, the expense and difficulty in transforming it into a classroom building, and the added expense of a new building. The college also decided to retain the second floor as the main floor, because of the location of the library entrance and the additional expense in completely changing the first and second floors. We must work within these bounds of $275,000 and use the building that we now have. This decision was made in an effort to secure one library, thus making control and operation more centralized. Alternatives that could be given serious consideration were limited.

We process 1,800 books a year and repair many books. I am the only trained librarian. We do have some halftime nonprofessional persons and about 130 hours per week of student library help. A room 9 feet x 11 feet served, until a few years ago, as the librarian's office and the workroom. While this arrangement served to foster togetherness among the staff, it did not add to the efficiency of the operation of the library. Some space was taken from the reading room level stack for work space. This proved much too small.

The growing independent study program has made it desirable to plan for a number of individual study tables. Several seminar rooms are being planned for the increasing number of discussion groups and seminar courses. We plan to retain open stacks and open reserve shelves. Until now, the loss of library materials has been quite small, certainly not enough to warrant the cost of more rigid control.

The Mennonite Historical Library is the only special collection in our library. It reflects the heritage and ideology of the church body that sponsors the college. This is a research library that serves not only the students, faculty, and constituency, but graduate students from other institutions and other persons interested in some phase of research concerning the Anabaptist-Mennonite tradition.

Early planning

In planning we have tried to take into consideration the major problems of the college. These include teacher education and the plan for a curriculum library in the stacks. The stress on science and the liberal arts, and the need for the required courses in Bible and philosophy, we have tried to reflect in our planning.

Donald Thompson, librarian of the Wabash College Library, Crawfordsville, Indiana, has served as our consultant, and has given us valuable aid in attempting to analyze our needs and make suggestions as to how they can best be met. The architectural firm that served when the building was erected worked on the addition. Mr. William Wells represented them. Both the consultant and the architect have encountered a number of problems which they will explain. The chairman of our Library Committee, Dr. Howard Rade, who is the head of our Business Economics Department, will give a brief floor-by-floor résumé of the building as we now have planned it.

HOWARD RADE

The library is on the main pedestrian-traveled route from the men's dormitory, past the classrooms, to the main dining hall. The main lines of travel go past the library which is reasonably central, and we have attempted to maintain it at that point. The addition is located at the rear of the library. The present ground-floor plan is devoted primarily to the boiler room and other facilities, the Mennonite Historical Library (since this is a special study), and one or two other items. We do have some question about this arrangement. Perhaps we have too many seating spaces. We have two entries and these probably would be controlled—at least, one of them—with a crash bar; the other would not be open regularly.

The first floor is now largely stacks with carrels. The second-floor level of the new addition coincides with the second-floor level of the present library. Here will be the main entrance. As you come up the stairway, you come to a foyer. The charging desk will be removed and placed in the present reading room in order to break up the reading room. A new entry will be made through the present existing stackroom into the new addition. We will have the staff workroom, catalogs, periodicals, bound periodicals, and other facilities on this floor.

The third floor is largely stacked with carrels and seminar rooms, as well as some staff rooms. What we are attempting to do is provide as much usable space as we can in as small an area as possible.

DONALD THOMPSON

There were a good many factors which made it necessary to consider rather carefully what needed to be done. For reasons previously noted, a new building could not be considered, and as a result we have the addition. It seemed logical that the only place to put the addition was on the back of the old building. This location, however, did present problems.

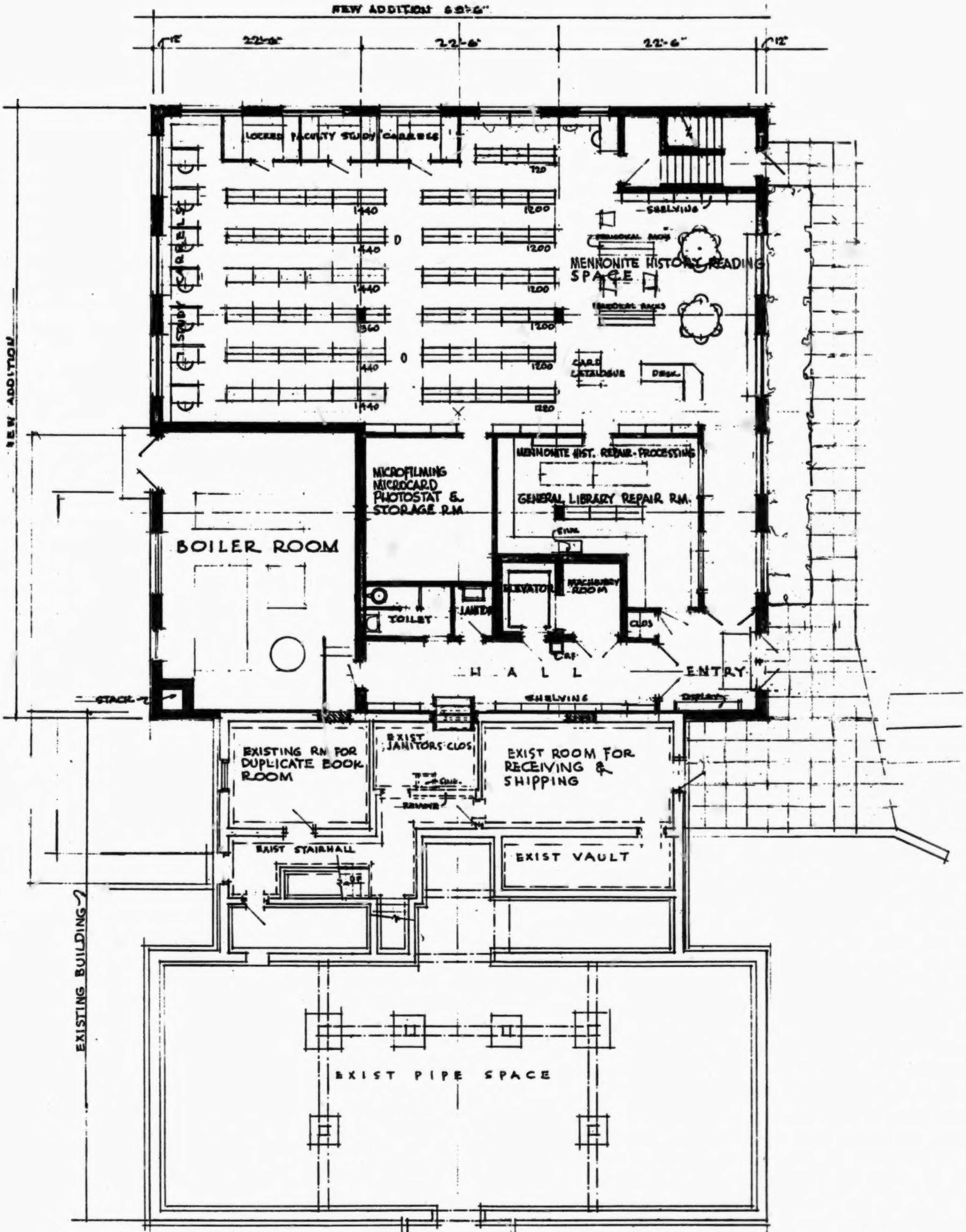
The first problem is that if the main entrance to the old building is used, it comes into a lobby. On the left of the lobby is the language laboratory and a series of two seminar rooms. On the right is the Musselman reception room, a room which the college uses for board meetings and general receptions of different kinds. These are the only public rooms that can be used for library purposes. You must go through the main lobby, up the stairway, and around a 270° angle to get to the second floor. Under the front of the main floor are the piping space, a crawl space, and behind that several rooms such as the shipping room, a vault, and a duplicate exchange or storage room.

It is difficult to do anything on the first floor because the lobby is the only place that can be used for library purposes. The floor does not lend itself to anything other than perhaps listening rooms, or something of that sort. A great many load-bearing walls in the building make it difficult to tear out any walls to make larger rooms. On the second floor, just behind the existing foyer area, is the circulation desk. Here is the only possible entrance into the addition from the main building.

Main entrance

It was thought at one time that if we cut through the wall from the main lobby, we could provide an entrance. This has two objections: there is a memorial plaque as you go up the stairway to the second floor, and one of the bookstacks comes part way up. Therefore, an entrance here would not be feasible. The only logical entrance is through the present circulation desk, which goes right through the bookstacks. If this were the main entrance, and it probably will be, the circulation desk would have to be moved elsewhere. In order to have some control over the entrance and provide broken-up space in the reference room and the large reading room on the front, it seems desirable that the circulation desk be put into the new charging area.

On the ground floor there is an entrance to the addition, but this cuts into the Mennonite Historical Collection and, of course, having two entrances with a small staff poses problems of staff and control. I don't know what the final conclusion will be, but I


NEW ADDITION 68'-6"
22'-6"
22'-6"
22'-6"
12"
12"
LOCKED FACULTY STUDY CARRELS
STUDY CARRELS
720
1440
1200
1360
SHELVING
PERIODICAL RACKS
MENNONITE HISTORY READING SPACE
CARD CATALOGUE
DESK
MICROFILMING MICROCARD PHOTOSTAT & STORAGE RM.
MENNONITE HIST. REPAIR-PROCESSING
GENERAL LIBRARY REPAIR RM.
BOILER ROOM
TOILET
JANITOR
ELEVATOR
MACHINERY ROOM
CLOS
HALL
ENTRY
SHELVING
DISPLAY
STACK
NEW ADDITION
EXISTING RM FOR DUPLICATE BOOK ROOM
EXIST JANITORS CLOS
EXIST ROOM FOR RECEIVING & SHIPPING
EXIST STAIRHALL
EXIST VAULT
EXIST PIPE SPACE
EXISTING BUILDING
EXISTING BUILDING

Musselman Library
Ground floor

T. P. McLaughlin & J. J. Keil, Architects would assume that possibly this entrance might be locked or supervised a few hours a day.

There are two or three other features you might note. On all the floors, except the second, there will be perhaps two, three, or four steps necessary between the two buildings, especially if there are to be 8-foot ceilings in the addition. This is because the multitier stack levels were 7 feet 6 inches. The attachment to the main floor, which will be the second floor, was the best place to make an even attachment. On the other floors there will be steps either up or down. The existing multitier bookstacks, because of the columns, will presumably be kept for bookstacks in the total building program.

The building as now planned is not necessarily the way it will finally turn out. For example, I was counting the seating and found seats for roughly 250 persons to serve the 500-600 enrollees. This is too ample. I would think more stacks will be added and some seats taken out. The shelving in both buildings is for roughly 140,000 volumes. This provides space for three or four times the size of the present collection, which is growing by some 2,500 volumes a year. There is a total in both buildings of approximately 28,000 square feet of floor space—around 8,800 square feet in the old building and about 19,000 square feet in the new building.

WILLIAM WELLS

There are varying concepts of openness or space which differ with individuals and their varying responses. These concepts vary in homes and other structures which different people inhabit. The German tends to seal off the sights and sounds of the outside world when home at night. He is fond of views but closes his doors and draws his curtains to seal off the enclosed space much more than is done in this country.

The Japanese thinks highly of the visual world, likes open houses, and desires to look out into the world. As the day ends, he gradually withdraws, reducing his visual field in stages. He accomplishes this by the opening and closing of panels. The lack of auditory privacy would be a curse to the German but not to the Arab.

The Arab would be bothered by the screens and the small scale of everything, including the miniature landscape, so often found in Japanese gardens. The Arab desires space and a real view. Inside his house he wants to be screened from outsiders but not from those in his inside world. When one questions an Arab on privacy and where he goes to be alone, he regards the question as if one who would want to be alone were mentally ill. Therefore, it seems as if we have accepted this openness in our buildings, including our libraries, from these other peoples. There are very few restricted areas and control is at a minimum.

Financial limitations

The operation of the library whose description follows is limited by finances, which is reflected in the number of personnel and the very few control points. The budget for the library addition, as a part of the over-all campus expansion plan, precludes any possibility of a new library.

The existing Musselman Library building at Bluffton College was built thirty to thirty-five years ago and was designed for a student body of from 200 to 300 students. The plan has closed or restricted stack accommodations, controlled from the second-floor charging desk. Other facilities include a large reading-study room, board meeting room, seminar study rooms with vault, work and receiving spaces, and a librarian's office.

Due to anticipated enrollments of from 600 to 700 students, changing library designs, a rigid budget, plus sentimental values placed on the existing building, it is desired that an addition be built to the existing structure. The site slopes away gently to the rear with no restrictions in that direction. The addition logically is then placed at the back.

There are new requirements now for space for books of Mennonite history, for private library volumes, and for writing collections. The use of part of the existing building for a language laboratory seems indicated. New facilities must be provided for book receiving, processing, duplicate book storage, microfilm storage, reproduction, printing, duplication, and viewing. Faculty and student carrels are indicated. A staff room and new, additional seminar and meeting rooms are necessary.

Existing stack facilities for 30,000 books must be added to and altered by new open stacks for 150,000 volumes in both the new and the existing building. Informal reading areas are desired throughout the new facilities, with adequate provision for typing and free flow use of most of the library facilities. Control is to be from the new second-floor charging desk, with use of the ground-floor addition for the staff and restricted reading.

The existing architectural style of the building is colonial, and that exterior appearance is to be maintained. Architecture is for people. It is for human purposes and only for human purposes that we build. As Charles Colbert said recently in the *American Institute of Architects Journal:* "We build to fulfill psychological necessity; to avoid pain, promote love, security, friendship; to attain self-esteem and recognition; and most nobly to create the civilizing influences of life itself. This cannot be achieved by the bland arrangement of blocks, nor the acceptance of tradition as it has evolved."[1]

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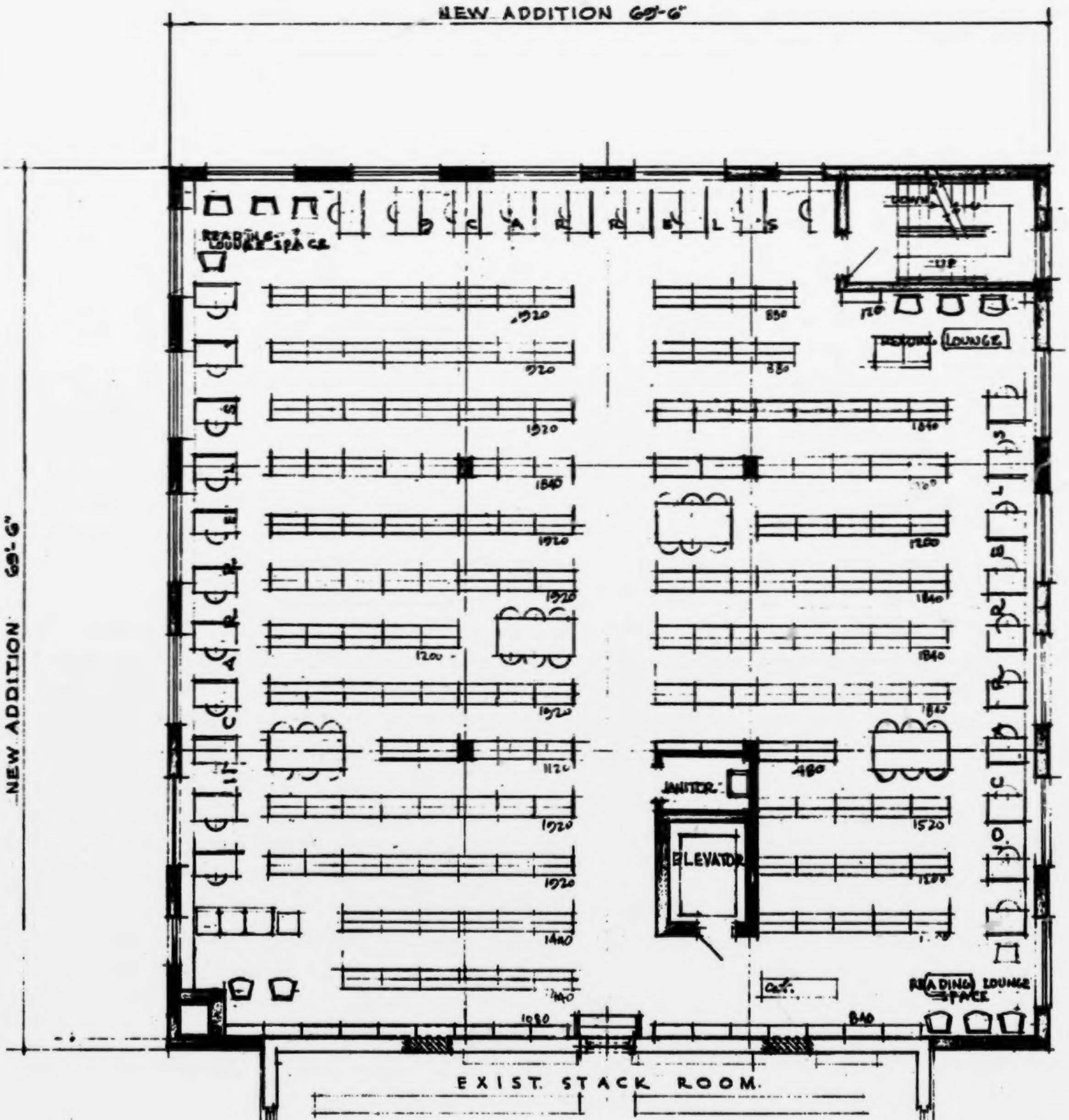
1. Charles R. Colbert, "Social Dimension of Design," *American Institute of Architects Journal*, July 1962, p.28.


NEW ADDITION 69'-6"
NEW ADDITION 69'-6"
CARRELS
READING LOUNGE SPACE
READING LOUNGE
UP
JANITOR
ELEVATOR
READING LOUNGE SPACE
EXIST. STACK ROOM
UP
MEMORIAL PLAQUE
EXIST VAULT
EXIST MENS TOILET
EXIST WOMENS TOILET
COAT RM.
EXIST CLOAK ROOM
EXIST. LOBBY
EXIST RECEPTION RM
LANGUAGE LABORATORY
CONTROL TABLE
EXIST VESTIBULE
EXISTING BUILDING 51'-7½"
EXIST BUILDING 69'-6"

Musselman Library
First floor

Preliminary sketches

The sketches were made about a year and a half ago. They are to be used mainly for the purpose of raising money. The money for the building is to be raised by subscription and by solicitation. No government moneys are available to date.

Financing of this library bears upon the over-all campus plan. The college has sufficient dormitories planned at the present time. They are revenue producing and can be used for securing loans. The college does not have sufficient classrooms or science rooms. It has a need for a library building, a fine arts building, a chapel, and a separate administration building.

The college has no sizable endowment. Most moneys must be raised. Donations are mostly small. Some foundation moneys are offered on a matching basis. Likewise, some moneys have been available from the Ford Foundation. The board of trustees determined the timetable on which this building is to be constructed. The dormitories are being built, and our library necessarily follows the dormitories.

DONALD DAVIDSON

My first college library position at the University of Redlands, Redlands, California, was in a building similar to this. I can understand the problems involved in deciding whether to have a two-story or three-story building, an addition to the rear, and other possibilities of that nature.

The exercise that you get going from your basement office and receiving room up to the main floor and back downstairs to the stacks, which are 15 feet away from where you started initially, is much better for the figure of the librarian than is the modular-type structure. One has only to look at the figure of Dr. Gratz to see the difference! I now live in a two-story modular building with an elevator.

Mr. Thompson wrote a program for this building a little more than a year ago and posed several fundamental issues to the college. Two basic decisions were made as a result of this program, which, I believe, may have clarified the problems for the planners. First, they decided to keep the old building because it was expensive to change it, it was difficult to convert it to a classroom, and it was hard to raise money.

The college also made the decision to retain the second floor as the main floor. The present location of the library entrance was one reason for this. A more logical location, perhaps, would have been on the main floor of the addition. I am inclined to think that the planners should keep this latter possibility in mind. The entrance might have to be changed, especially if an inherently flexible addition to the building is modified through changes in library technology, changes in academic pattern, or for other reasons.

The retention of the original building and the use of the second floor as the main floor created problems of circulation and control, but I think the addition meets many of the requirements of good modular construction. I like the rectangularity of shape and the unity of appearance effected in the expansion. Also, it will be done by the same architectural firm as used previously and will continue the colonial brick style, probably with Georgia marble for accent.

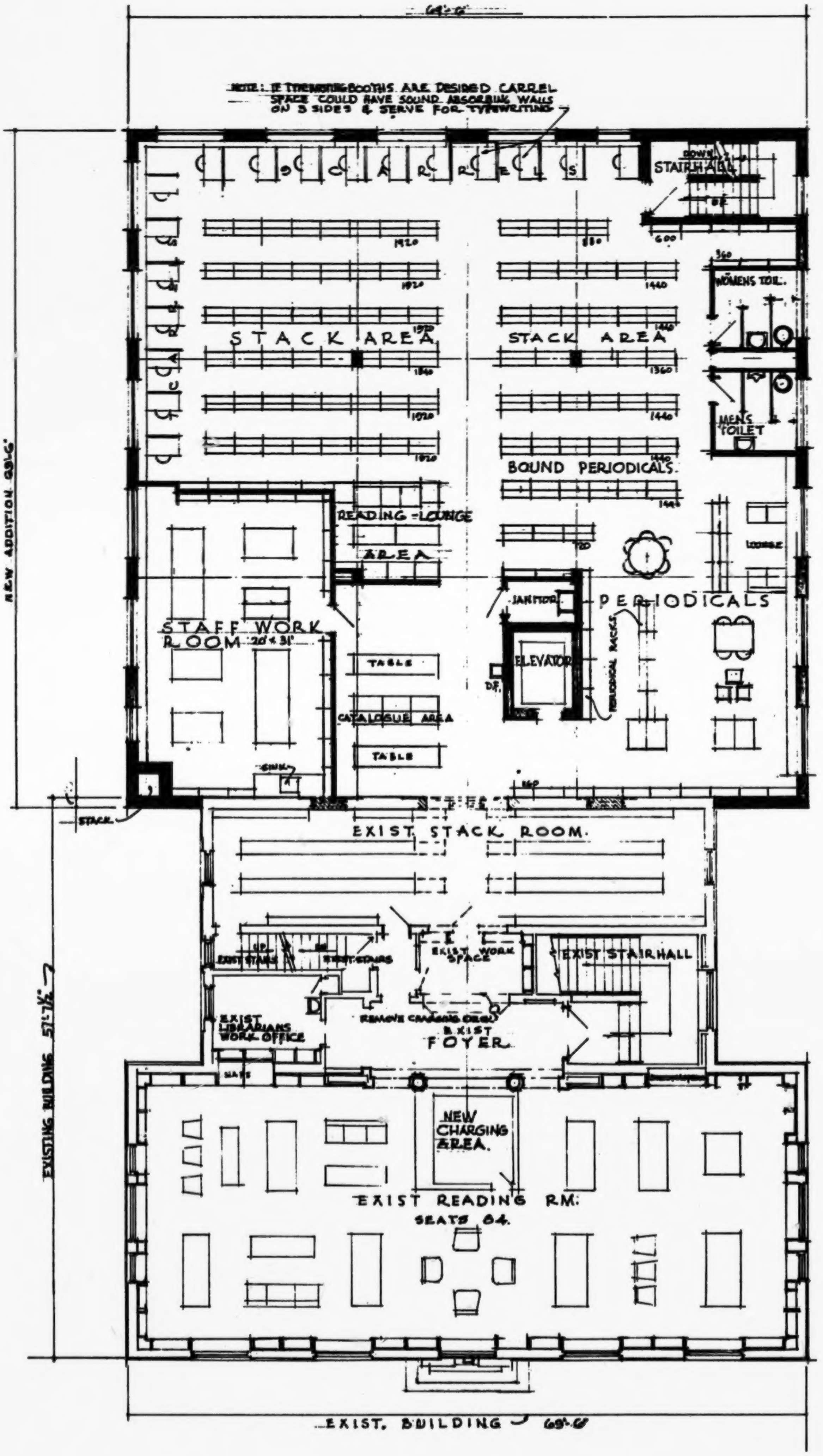
Circulation problems

I think we should attempt to bring to a focus again, if not for the builders at Bluffton, for others who might be planning an expansion, the inherent awkwardness of the circulation and control pattern that results from this addition.

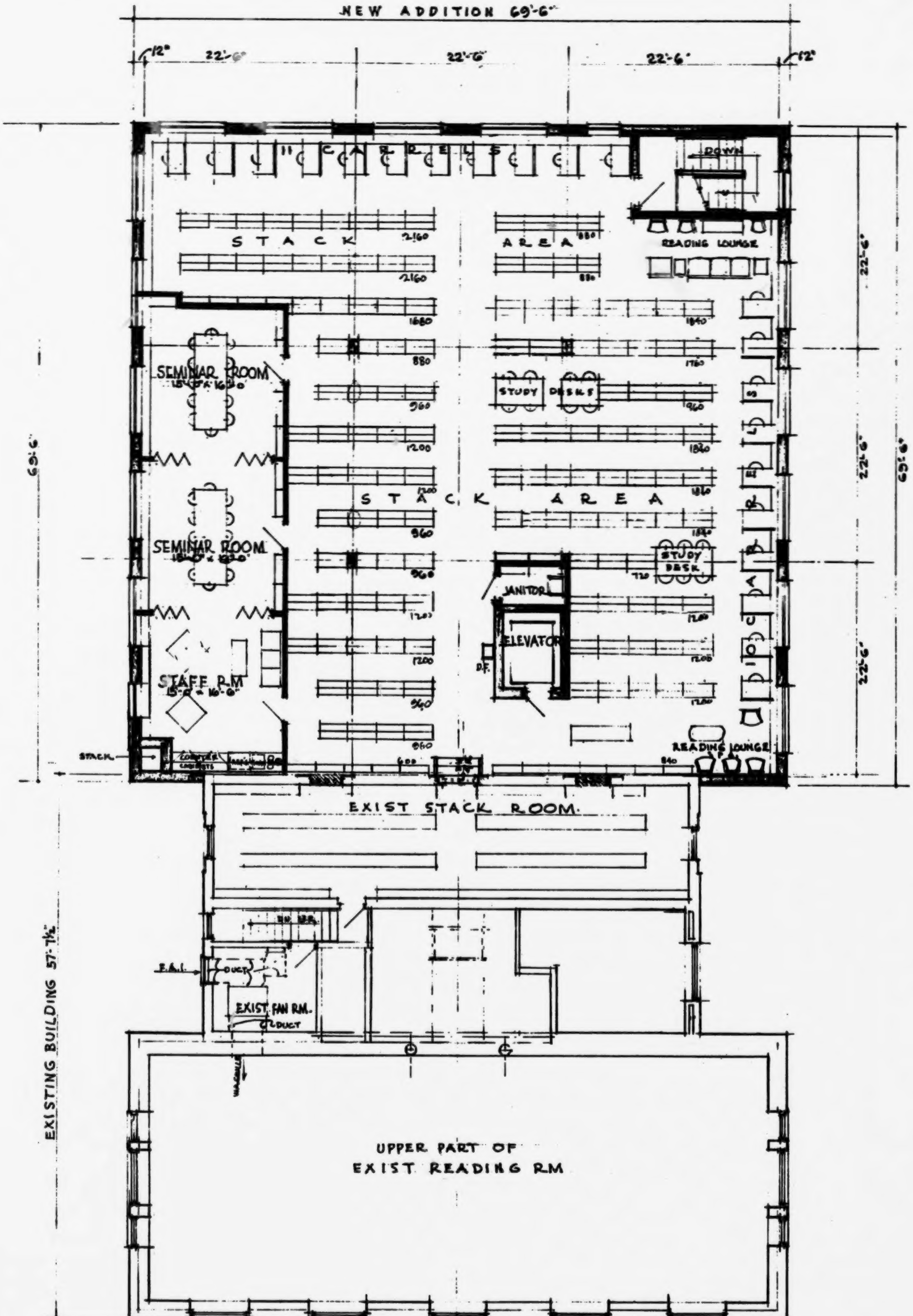
Mr. Thompson has told you that as you enter the building, you go past what is becoming a language library and into the reception room. From there you go up a stairway and, after walking 35 feet through a lobby, you come into the old foyer location. Then you have to go through what Dr. Rade is afraid may look like a tunnel—a stack floor—into the structure. If you come in at the ground floor and go through to the historical collection, it is possible to get up into the first-floor lobby. I believe, as far as control of traffic is concerned, that in coming up the steps from the new ground floor to the old ground floor, you go across and then straight ahead. However, on the right there is a stack stairway. This would be a leak, especially if the door does not provide for some form of security.

This is just one example of the care which I think should be put into this initial stage. Provision should be made for what would have to be done later if Bluffton College had to take security measures as most colleges do. I do hope the college will give attention to this particular problem because I think the whole pattern of circulation may change. Through the life of a brick building such as this the entrances may change. I think, further, that the behavior of the students may not be so laudable as it currently appears with regard to the walking-off with books. After all, the more students you have, the more pressures you have and the more absent-mindedness results.

I would like to see as much open space as possible for future flexibility. When I look at the floor plan of a modular building such as this—a semistandard 22 1/2 feet x 22 1/2 feet base size—I like to see dimensions that extend three bays in length and two bays in width. Every time I see a modular building with bay construction of only one bay, I tend to wince.


69'-6"
NOTE: IF TYPEWRITING BOOTHS ARE DESIRED CARREL SPACE COULD HAVE SOUND ABSORBING WALLS ON 3 SIDES & SERVE FOR TYPEWRITING
CARRELS
STAIRHALL
DOWN
UP
STACK AREA
STACK AREA
1920
880
600
1920
1440
360
WOMENS TOIL.
1920
1440
1360
1440
1920
1440
MENS TOILET
1920
1440
BOUND PERIODICALS
1440
READING - LOUNGE AREA
720
LOUNGE
JANITOR
PERIODICALS
STAFF WORK ROOM 20'x31'
TABLE
ELEVATOR
D.F.
PERIODICAL RACKS
CATALOGUE AREA
TABLE
SINK
160
NEW ADDITION 69'-6"
STACK
EXIST. STACK ROOM
EXIST STAIRS
EXIST STAIRS
EXIST WORK SPACE
EXIST STAIRHALL
EXIST LIBRARIANS WORK OFFICE
REMOVE CHARGING DESK
EXIST FOYER
MAPS
NEW CHARGING AREA.
EXIST READING RM.
SEATS 84.
EXISTING BUILDING 57'-7½"
EXIST. BUILDING 69'-6"

Musselman Library
Second floor


NEW ADDITION 69'-6"
12"
22'-6"
22'-6"
22'-6"
12"
CARRELS
DOWN
READING LOUNGE
STACK AREA
SEMINAR ROOM
SEMINAR ROOM
STAFF RM
STUDY DESKS
STACK AREA
STUDY DESK
JANITOR
ELEVATOR
CARRELS
READING LOUNGE
STACK
69'-6"
22'-6"
22'-6"
22'-6"
69'-6"
EXIST STACK ROOM
EXIST FAN RM.
DUCT
UPPER PART OF EXIST READING RM
EXISTING BUILDING 57'-7½"
EXIST BUILDING 69'-6"

Musselman Library
Third floor

Grouping utilities

We all like to see utilities grouped. I would make two suggestions here. I would like to see the elevator in a different location, in order to open up the area. I would move the elevator adjacent to the boiler-room door. Of course, the doorway to the elevator would have to be on the side instead of on the front.

I would like to see the janitor closets on all floors moved adjacent to the elevator so that they would all stack up above the boiler room. I do not think this location will create any difficulties, although it might bring the elevator rather close to the accessway. There are two reasons for this suggestion: grouping of utilities and the freeing of space.

The result of this change would be the moving of the toilets on the second floor. They could be split and put on the second and fourth floors of the addition. If not, I would suggest moving them behind the elevator. This would require adding a small corridor, moving a stack, and placing the stack workers toward the back of the total building.

Where is there a woman's quiet room with a cot in it? I do not see one. In the stack plan, in order to put in reading tables and seating standards, the stack standards require the removal of two stack racks rather than one to make seating alcoves. They are too cramped as they are now.

I would like to examine briefly the language laboratory arrangement because at my home campus we have three listening laboratories. The first of these was arranged like this one. The second extended out from the wall with the instructor in the front of the room. There was an enclosure around each alcove, with an opening in the front so that the student could see the instructor. In our third listening laboratory some architectural mind had figured out a glass front which would serve the same purpose. I would like to suggest an arrangement here out from the wall, although I realize that the location of listening laboratories on the first floor may have been made to take advantage of the shape of the room.

If the elevator is moved, the question should be asked, "How much of a microfilm room do you really need?" It seems to me that the one on the first floor is too large. The whole plan should consider that some time some librarian will want to move the periodicals into the old reading room, add more seating to the new stack addition, or make some other revision. The elevator controls should be watched. Maybe the elevator should go only to the ground floor under certain circumstances. The space, however, seems reasonable.

My final question is whether Bluffton can repeat the satisfactory bidding experience that apparently the State College of Iowa had and build 19,000 square feet for $275,000.

DISCUSSION

MRS. BYERS (former librarian at Bluffton College): I don't know whether I should make an apology for this building or not, but you will remember that it was built in 1930, before we had any modular type of building. The only examples we had to go by were the buildings at the time.

Another comment that I would like to make is with regard to the stairs. While I would not put the main reading room on the second floor, I still wonder whether we do not pamper our students too much, whether the time will come when they will not be able to climb any steps at all. We have an elevator in our building at Agnes Scott College, which the students use to go less than 8 feet whereas most of the staff members walk up and down. I do think we pamper our students too much, especially in the South.

I would also like to comment on the orientation of the building. Nothing has been said about it, and it concerns the windows at the back of the addition. Bluffton does not run straight. The main street of the town runs southwest and northeast. Therefore, the back of the building has a southwest exposure. In the wintertime we get a great deal of sun coming in the southwest windows. I wonder what provision has been made for covering the windows. I think that the sun would be very bothersome to people working in the stacks, especially, let us say, from twelve o'clock on. The sun would come in those windows for the rest of the afternoon.

I agree with Mr. Davidson with regard to moving the elevator. I would like to see it against that existing stack wall if possible. I wonder if the elevator could open both on the north side and on the south side. If it were moved there, it would serve both the old and the new stack areas.

The different floor levels bother me a great deal, and I have studied them for quite some time. The floor levels, particularly the first floor, do not line up.

I have some questions with regard to the new charging area. I would like to break up the reading room, although I do not feel it is especially large in comparison with many reading rooms that have been built and some that are still being built. I wonder if you would not bring some noise into that reference or reading room with the charging desk. With regard to the microtechniques on the ground floor, I did not see what provision had been made for reading machines; if there are provisions, where do you plan to read microfilms or cards?

I should like to ask Mr. Abel if the University of Tennessee did not remove the old stacks and change that entire area?

MR. ABEL: Our architects felt that the multitier stack level was a hindrance in any direction that we went, as far as the addition was concerned. As a result, the old stacks were torn down and we have achieved a rather open and flexible situation.

Question: How long are you going to take to increase your book collection from 35,000 to 140,000 volumes? If you do that in ten years' time, that means 10,000 volumes a year. Where are you going to put the books when you get them to catalog? I don't believe you have work area enough for cataloging and processing all of the gifts you will receive, in addition, of course, to the items you purchase. I am wondering where you are going to put the extra volumes that you will require in order to increase your collection to 140,000.

MR. GRATZ: We do have prospects of increasing this rapidly—10,000 volumes a year. Of course, I wish we could retain that goal, but my personal belief is that it will go to a lower figure. I doubt if it will go above 3,000 next year and if this will increase to 10,000 in the next fifteen years unless some unforeseeable stroke of good fortune comes to us. Therefore, I don't think that we will have the problem you mention. I presume that your question is that the work space is not adequate and, of course, that point is well taken.

Question: How high is the ceiling in the existing reading room?

MR. GRATZ: Roughly, about 16 feet.

MR. HEILIGER: I would gladly trade that whole old building for one more floor in the new building. You really would give up only 84 sets of reading space, 4 tiers of stacks, and 1 office. I think one more floor in the new part would very nicely take the place of all the space you would lose in the old building. I do not know how much money is going to be involved in changing over the old building to fit the new situation. But I would think, over-all for the college, that if you could give the old building to the administration, put in the extra money that would be required to add another floor, and then expand the existing floors, you would be much better off.

If you have only one professional librarian, it seems to me that during the day he would have to be surrounded by the reference collection and at night he would have to be working the catalog areas.

Question: Should not the elevator be moved against the old building, with an opening from every floor in the old and the new buildings? I think that this arrangement would be practical and a great improvement. If that were done, then why not move the circulation desk down to the place where you now show the language laboratory, so that students from all levels would come there to charge their books? By doing this, you can have your reserve books back of that circulation desk at that point.

If you leave the circulation desk where it is now, is there any reason why you could not face it on the foyer so that you will not spoil the reading room? I have never found it practical to have a circulation desk in the reading room. It creates too much noise.

Why have such large seminar rooms on the top floor? Experience shows that they are nothing but classrooms. We may have lofty ideas about a professor bringing an armful of books out of the bookstacks, taking them to the seminar rooms, and teaching with them. It just does not work out that way. Seminar rooms on that level will mean an enormous amount of traffic in a very small stairway area and a great deal of noise. It seems to me that they should be moved to the ground floor somewhere or else be taken out of the building entirely.

Western Kentucky State College Library

Bowling Green, Kentucky

STATISTICAL DATA

Architect: W. S. Arrasmith, Louisville, Kentucky
J. P. Wilk, Bowling Green, Kentucky
Type of library: College
Population to be served: 5,131
Area: 73,715 square feet
Book capacity: 260,000 volumes
Seating capacity: 1,150
Cost: Building—$1,000,000
Cost per square foot: $12-$13 (estimated)

PRESENTATION OF PLANS

Librarian: Sara Tyler
Critic: Stanley McElderry, Librarian, San Fernando Valley State College, Northridge, California

SARA TYLER

We do not have a new building nor do we have an addition to an existing building, but the administration desires to convert a building on the campus into a library. This building is a physical education building. As librarians and consultants, I know that your first reaction will be, "Don't do this." We have likewise said that.

Bowling Green is a town of around 30,000 in the southern part of Kentucky and is in an agricultural area. Industry has moved in, but the college is the town's main industry. We are about halfway between Louisville and Nashville, enjoy their cultural advantages, and, in turn, serve the smaller towns in our area in the same capacity.

Western Kentucky State College was established as a state normal school in 1906 by an act of the legislature. The site was a 162-acre tract of land which had historical significance as a Confederate fort. The training of teachers has always been the college's main purpose, but the curricula have been expanded and revised to include a broad liberal arts program and a preprofessional training for medicine, dentistry, ministry, law, and engineering. The expansion of the purposes of the institution is evidenced by the change in name from Western Kentucky State Normal School to Western Kentucky State Teachers College in 1922, and then to Western Kentucky State College in 1948.

Further expansion has been established by mergers with other colleges. In January of 1928 the property of Ogden College, a school for boys founded in 1877 and adjacent to Western, was leased to the board of regents of the college. Effective as of June 1, 1963, the Bowling Green College of Commerce, a privately operated school, was merged with Western.

During the fifty-seven years that Western has served the state and region, some significant developments have affected the library and its growth. There was authorization in 1931-36 to offer master's degrees in subject fields. Authorization was made in 1941 to offer master's degrees in education only. Recent approval was given by the Council of Public Higher Education to offer a master's degree in arts and humanities. Saturday afternoon and evening classes on a graduate and undergraduate level have been offered for a number of years.

There was an increase in enrollment in September, 1961, of 33 1/3 percent, which has created some problems. There is an increase in state support, as will be shown in these figures; 1959-60, $1,414,000; 1962-63, $3,199,772. The figures are for the college and not for the library.

New committees have been established; one, in particular, affects the use of the library. This is the Faculty Research Committee to encourage research on the part of our newer faculty members. There has been an expansion in our course offerings and additional faculty appointments. By September of this year we will have 203 full-time professors, which is double the number of some six or eight years ago.

The new library building will be the fourth in the history of the college. The first was in a large classroom, the second in a clubhouse, and the third in a new three-story building built in 1929. The latter building is now thirty-four years old and is inadequate in every respect to serve a growing college community. For the past four or more years the college administration and librarians have studied and surveyed all possibilities for our expansion of library facilities.

Site location

The hilltop site of the college has become crowded. The location of the present library does not permit wings or additions sufficiently adequate to justify the expense of remodeling. Also, any periphery location would involve a delay in acquisition of land, or removal of such a distance from the center of the campus as to pose problems of greater degree. I have been told, however, that it is no longer necessary to have a library in the center of the campus and that we might well consider moving to the perimeter.

The new building will be the central library on the campus. There are at present three departmental libraries, two of which will be continued as such. First, there is the Kentucky Library, of nearly 20,000 volumes, of rare Kentucky books in a separate building in the Kentucky Museum. There is a science library of approximately 10,000 books and journals in the new Thompson Science Building. The library of approximately 15,000 volumes of the commercial school recently absorbed by the college will be housed, at least for one year, in its present building. A seminar library in the music building will be transferred, we feel sure, to the new library building.

We are aware that you believe we should not do a remodeling or a conversion. We are willing to concede this point. There are problems inherent in such a project. Load-bearing walls cannot be changed, existing stairways cannot be torn out for new ones in other places, and there is the necessity of sharing, at least temporarily, 4,083 square feet on the ground-floor level with the industrial arts department. The department adjoins the physical education building, and until such time as it can have an addition, it wants us to release this much space. We will not have a sufficient stack space but will have to spread the collection over the remaining floors. We would like to use reader-book arrangements.

Possibilities for expansion

The possibilities for expansion, insofar as the present building is concerned, are few. We could acquire the 4,000 square feet which the industrial arts department will have, but this is a drop in the bucket. There is an area to the right of the building, approximately 80 feet x 170 feet, that has been promised for our future expansion.

Before we look at the very preliminary and tentative floor plans, I would like to give some figures. In our present building we have 20,920 square feet for library purposes. We share some of this with the library science department on the third floor and a little theater on the first floor. In the physical education building there will be 73,715 square feet, less the 4,083 square feet for the industrial arts department, which leaves 69,632 square feet for library purposes.

At the present time, our collection in the main library is approximately 100,000 volumes. We have not taken inventory in a good many years, and we are not sure that we have all of those volumes. We also have approximately 11,000 bound government documents and, in addition, nearly a stack floor of unbound documents. We have around 500 magazines on our current subscription list in the college library; our bound volumes of journals are included in our volumes. We are open 79 hours a week.

In the main college library we have 9 staff members, 1 working halftime supervising the science library. We also have had 1 graduate assistant and the promise of a second this fall. We have between 50 and 60 student assistants. In our first planning we hope to have a seating capacity for some 1,500 students. Our enrollment at the present time (head count) is over 5,000, which, equated, comes to around 4,000 plus. We hope to plan for a 375,000-volume capacity. If we can, we will seat 1,000 and perhaps have a stack capacity of 240,000-250,000 volumes.

Specific plans

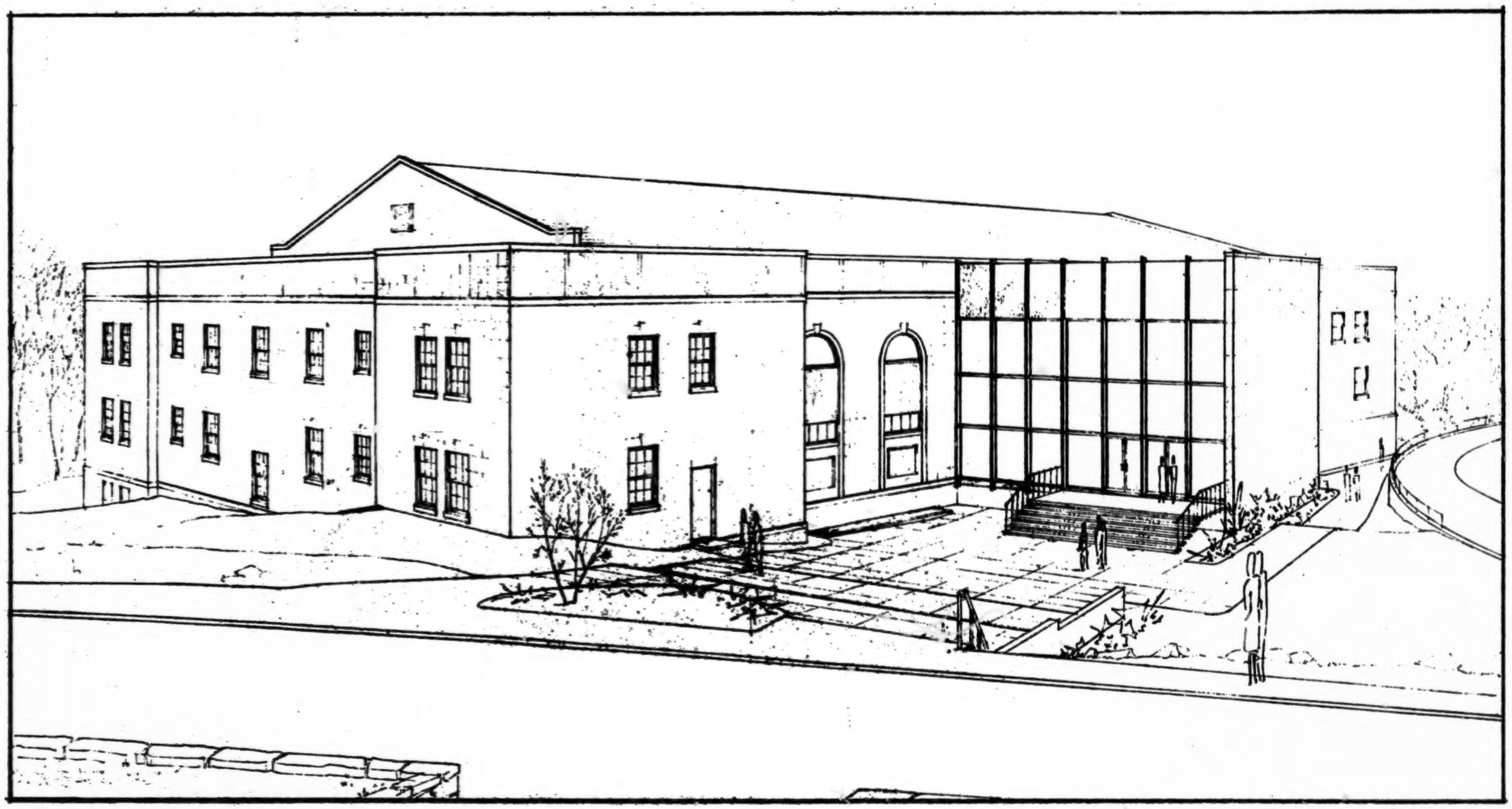
The vestibule will be in the new part; it will have a stairway up to the second floor and down to the ground level. Directly opposite, as you enter, will be the doors into the reference room. We realize this is much too large for a reading area though we will have all of our reference books there. At the right, near the catalogs and acquisitions area, we expect to have a bibliography alcove. On the left side of the reference room we are now considering putting enough stacks to have a humanities collection, at least from the 800's through the 829's. We have a room marked for government documents. We hope to place there all the bound volumes used most frequently. The students can then use them without our having to get them, as we are doing at the present time.

The wings on either side are separated from what has been the gymnasium floor by load-bearing walls. The walls cannot be changed. We are attempting to put in walls or dividers that are not permanent, in the event that at a later time we may wish to make a change in this section.

The circulation desk is at the left. There will be a browsing area and a passageway which will go to another stairway down into a stack area. We have a glass-enclosed workroom for the circulation librarian and have recently decided that we will move our Xerox machine to another little glass area, to be used there with supervision. The elevator is not for passengers but for the librarians and the transportation of books. It is back of the circulation area, near the office, and is open to the people in the reference room.

In the right wing are the administrative offices, one for the director of library services and one for the head librarian and her secretary. The secretary, at the present time, is in charge of acquisitions and works with me. We plan to have a sink, closet, and storage space in the catalog office.

On the right side we have a conference room for library committee meetings, staff meetings, small classes in the use of the library, and possibly one or two other functions. We do not intend it to be used by others. We have a space for a large backlog of



Western Kentucky State College Library
Architect's rendering

W. S. Arrasmith & J. P. Wilk, Architects uncataloged materials; here they can be cataloged and indexed as the staff has time.

Ground level

On the right side of the ground-floor level will be offices and classrooms for the library science department. The courses in children's literature are now taught in the library science department. We have had a curriculum or teaching materials room in the library. This will not need to be expanded as our education department wishes to have it in its own department.

The rooms to the left, extending to the stairway, will be used by the industrial arts department. There will be another storage area for gifts and materials, which can be left there until we have time to route them upstairs. There are also a fairly large receiving area and a service elevator. We have stacks across the middle front, and to the left we are planning a division for the bulk of our government documents.

We plan to have only the one exit with checkers at the door. Other doors will not be used, but we feel that it is necessary to have them. The vestibule, as the architects have designed it, will be open and will be a full two stories. The ground-floor area has been enlarged a bit, because only the lounges are reserved for smoking.

Second floor

The balcony in the gymnasium is to be removed and a second floor placed all the way across, which will give us a very large area. This will be divided with shelving into a reserve reading room and a periodicals room. We plan to use stacks and desks interspersed and to have carrels down the window walls. The reserve desk will probably go on the left side, next to the outside wall. The rooms in the wing will be for an art collection and for a music and listening room. Our recordings collection will be serviced predominantly from the reserve desk.

On the right-hand side will be space for carrels and a staff lounge with a kitchen. There will be a microfilm room adjacent to the periodicals room. The last few years we have added a large number of journals on microfilm and microcard.

We do not have a separate room for our binding preparation. At present the periodicals librarian handles that, and the reserve librarian is in charge of the bookbinding preparation. We cannot as yet designate one person to take care of these chores.

There is a subbasement that will contain our mechanical equipment for air conditioning. We will not have anything on top of the building. The heating is tied in with the central heating for the campus. I am a little concerned about the ceiling heights. I think that on the first floor the height will be 10 feet, and on the second floor it will be 8 feet. In a space as large as this such a height may become oppressive.

The exterior of the building is of stone. Our windows will be utilized as they are. We will not have a great deal of window space by the time the second floor is added and 3 feet, or whatever is necessary, is allowed for the ductwork. However, we will have enough room on both floors to have shelving under the windows. If we want to put individual study materials there, we can do so.

We hope to have tables for no more than 4 people. We will have to continue to use a great deal of the equipment we already have, and the tables that we now have seat 6 people. One million dollars has been set aside for the conversion of this building, and the architects have said that it can be done for $12-$13 a square foot.

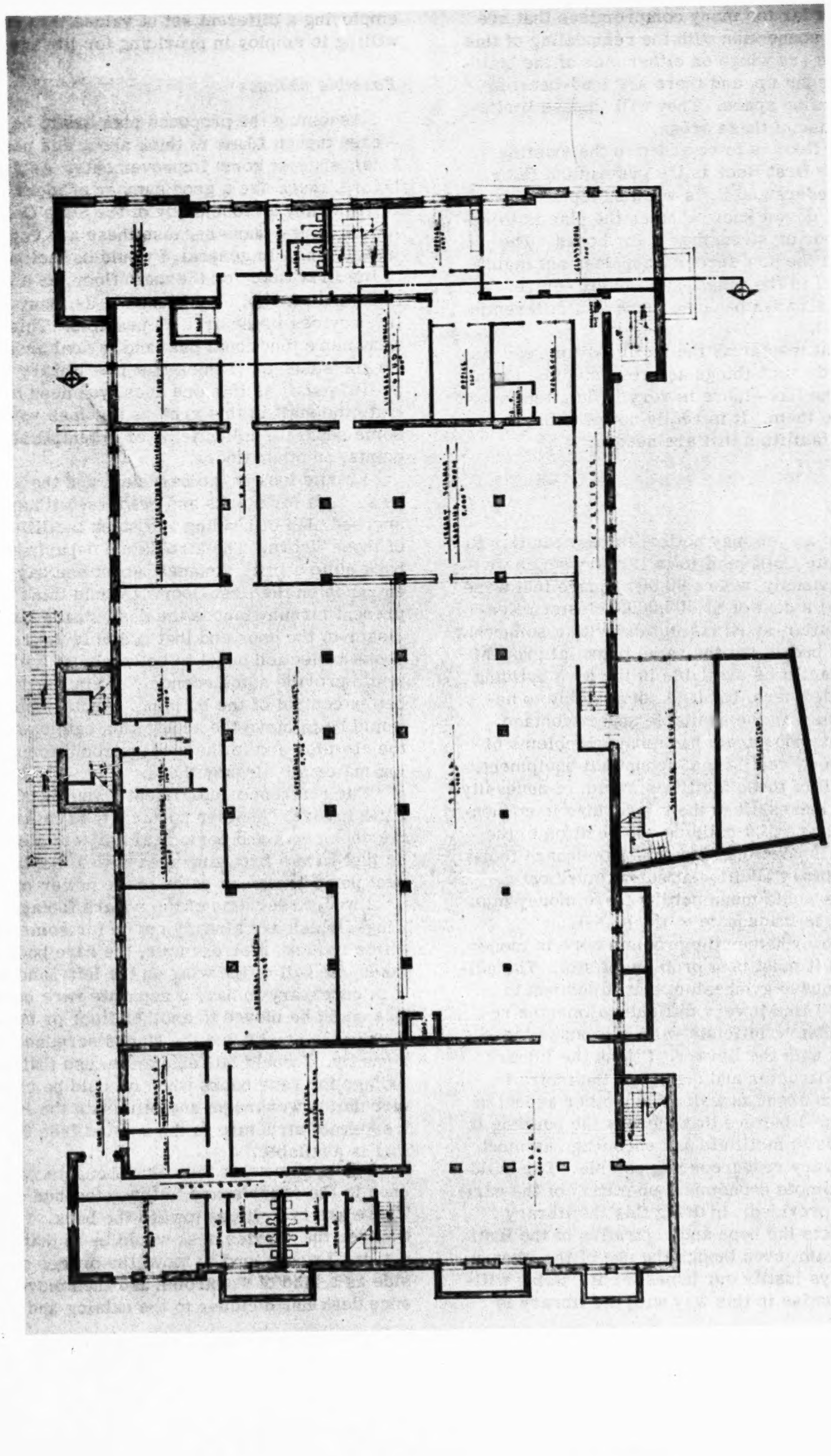
STANLEY McELDERRY

I find it difficult to say anything very charitable about this plan. I am a poor person to criticize this building because I come from a new college which has spent $5,000,000 developing a new plan. The first million dollars was spent on the library, and the last on the physical education building. If the faculty had voted on the issue, they would have spent that money on books for the library.

I have never tried to accommodate a library in a gymnasium, but I have seen a library put temporarily into a women's gymnasium, which is a little more functional than a men's gymnasium. In this particular women's gymnasium the showers were built into little compartments, which proved to be quite a functional place for the catalogers. It was an item of prestige to secure one of these cubicles. In the locker area, a high curbing had been poured for the lockers. This was the first time I had ever been in a stack where the bottom shelf was at high level!

Seriously, I think this proposal of Western Kentucky State College leaves a great deal to be desired. I don't think it is the best use of the money available. If $1,000,000 is to be spent on this building, I think that about the same amount of more functional space could be gained by starting on a new site.

As I calculate the requirements for the library, based on the enrollment and the resources, it would take about 60,000 square feet to accommodate present needs. The plans of the proposed library show a usable space available to the library of about 50,000 square feet. This is not counting the library science area or the additional space that may be available when the industrial arts department moves out. But, basically, the college would be getting about 50,000 square feet for an investment of $1,000,000. I would judge that any architect would be willing to take on that commission and come up with a more suitable plan.



Western Kentucky State College Library
Basement

There are far too many compromises that are necessary in connection with the remodeling of this space. There are wings on either side of the building which are cut up, and there are load-bearing walls that confine space. They will impose limitations on the use of these areas.

A second floor is to be added to the existing building. The first floor is the gymnasium floor which, as I understand it, is wood on top of a concrete slab. I do not know whether the plan is to remove this floor or strengthen it for books. The floor level on the new second floor does not match the floor level in the wings, and would require ramps and stairways because there is a differential of about 2 feet.

I think that insofar as the facilities for readers are concerned—such things as group studies, typing rooms, and the like—there is very little attention being given to them. It is really not possible to include all the facilities that are needed.

Similar plans

This plan, as you may notice, is very similar to that of the State College of Iowa Library which we looked at previously, where 90,000 square feet were being added at a cost of $1,500,000. Western Kentucky is a similar-sized institution, with a somewhat smaller book budget but the same potential growth. Many of the facilities available in the Iowa building would be needed here, but it is not possible to accommodate them in the available square footage.

You would undoubtedly have many problems of lighting, heating, ventilating, acoustical equipment, and so on. All of these facilities would, of necessity, be somewhat makeshift in their structure in connection with this type of a building. In relation to the expansion, it is possible to add enough square footage for the library addition at some future date. However, this would mean putting more money into a library that is inadequate at the outset.

I don't know whether the problem here is money or not. I feel it must be a problem of site. The college has an unused gymnasium that it desires to make use of. I find it very difficult to imagine responsible academic officials willing to make these compromises with the library. I think the library reflects the character and quality of the instructional program about as well as any other aspect of the institution. I believe that the way the building is arranged tends to facilitate and encourage as much use of the library resources as possible. The building should promote economical operation of the various services provided. In doing this the library building reflects the hope and aspiration of the institutional program, even though the use of the library does not always justify our hopes for it. Being willing to compromise in this way with the library is employing a different set of values than I would be willing to employ in providing for library facilities.

Possible changes

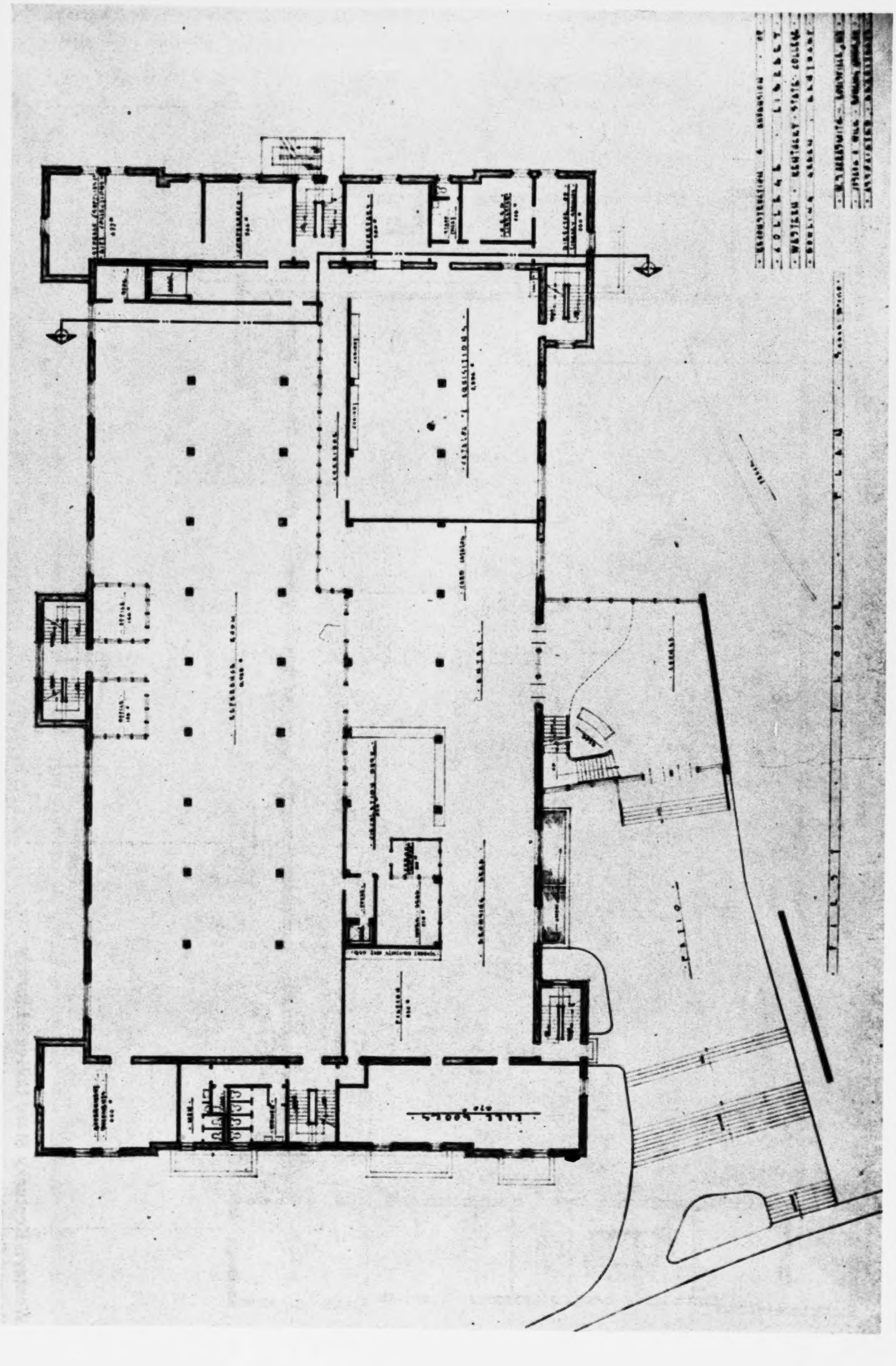
Assuming the proposed plan has to be employed —even though I hate to think about this possibility— I can suggest some improvements. As I indicated before, there are a good number of ideas that could be gained by a close study of the State College of Iowa Library plans because these are comparable institutions. In general, I would be inclined to think of the first floor, or the main floor, as a service floor and attempt to concentrate as many of the public services in the area as possible. This is a somewhat more functional plan and logical arrangement for the students. I think that in a library which has as little staff as this one does, you need to concentrate the staff in this area as much as you can, with some separate collections, or potential service points, on other floors.

I would look at the basement and the second floor as an area for stacks and readers, with an interspersed plan of reading and stack facilities on both of those floors. The circulation department is set back quite a little distance, about one bay, from the entrance on the first floor. I would think that under present circumstances the desk should be moved closer to the door and that possibly the reserve books collection ought to be combined with it. This would provide some economy of staff and somewhat better control of the building. Another possibility would be to move the acquisition cataloger closer to the elevator and to the storage room for unit catalog materials already there.

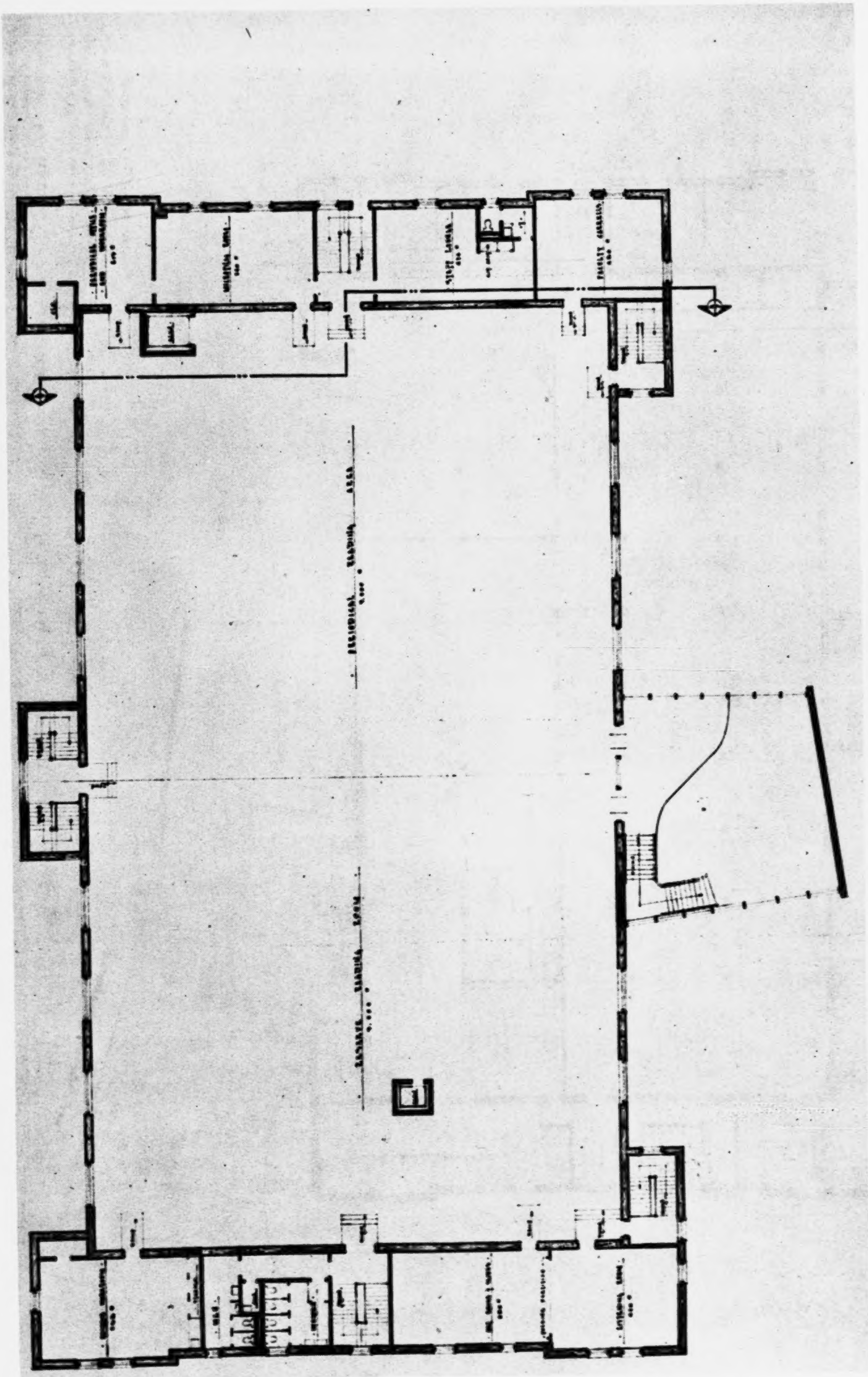
The reference department I would cut down a little in size. Another possibility is to put some of the documents and periodical materials in with it, or just have a browsing area with a display of current periodicals and some of the newer materials.

I would use some of the square footage in the wings, which are already cut up for some of the office spaces. For example, the rare books section takes one half of the wing on the left-hand side. If it is necessary to have a separate rare books area, this could be moved to another floor or could be kept in the stacks and the stacks screened off for security. I would be reluctant to use that square footage for rare books when it could be used for a circulation workroom and eliminate the building of a separate structure in the limited free floor space that is available.

I have somewhat the same thoughts with reference to the office space in the reference department. There are two offices toward the back. I don't know whether the service desk would be at that point or not, but I would tend to move the offices over to the side as a kind of workroom and then move the reference desk much closer to the catalog and bibliogra-



Western Kentucky State College Library
First floor



Western Kentucky State College Library
Second floor

phy area. I think that the orientation of the technical services, reference, and bibliography areas needs to be brought together. I have not attempted to go into a great deal of detail on the reworking of this particular space because I would be willing to wager that nobody would buy this plan if he had another choice.

DISCUSSION

MISS TYLER: The two offices for the reference librarians, if not portable, will be such that they can be moved. They are, in no sense of the word, permanent. In the event we do not want them there, the service and reference desk would be much nearer the entrance to the reference room.

MR. METCALF: Isn't the problem really to convince the powers that be that they are throwing away money and good service and, in the long run, hurting the institution? I think that with a proper presentation, and this would have to be done from the outside, you might get the plan recalled. I think you can build a library which will give you more service with the same amount of money. Perhaps you could draw plans on that basis and suggest this building be used for some other purposes. This proposed library facility certainly is not worth $1,000,000.

Comment: If it is impossible for the librarian or the residents of the college to change the collective minds of the powers that be, they might hire a consultant. We had the same problem. We had a women's gymnasium which some persons had fond hopes of converting into a library. As soon as our consultant arrived, he indicated this building could not be used for that purpose. We would be throwing good money after bad, and in the long run the cost to remodel the gymnasium would be more than that of a new building. As a result, we now have plans for a brand-new library building. The old gymnasium is still there. It can be used for a swimming pool or whatever else the authorities may think to do with it. It is not going to be a library.

Asbury Theological Seminary Library

Wilmore, Kentucky

STATISTICAL DATA

Architect: J. Herschel Fisher & Pat Y. Spillman, Dallas, Texas
Type of library: Theological seminary
Population to be served: 400
Area: 34,800 square feet
Book capacity: 129,500 volumes
Seating capacity: 247
Cost: Building—$540,000
Cost per square foot: $14.50 (construction cost)

PRESENTATION OF PLANS

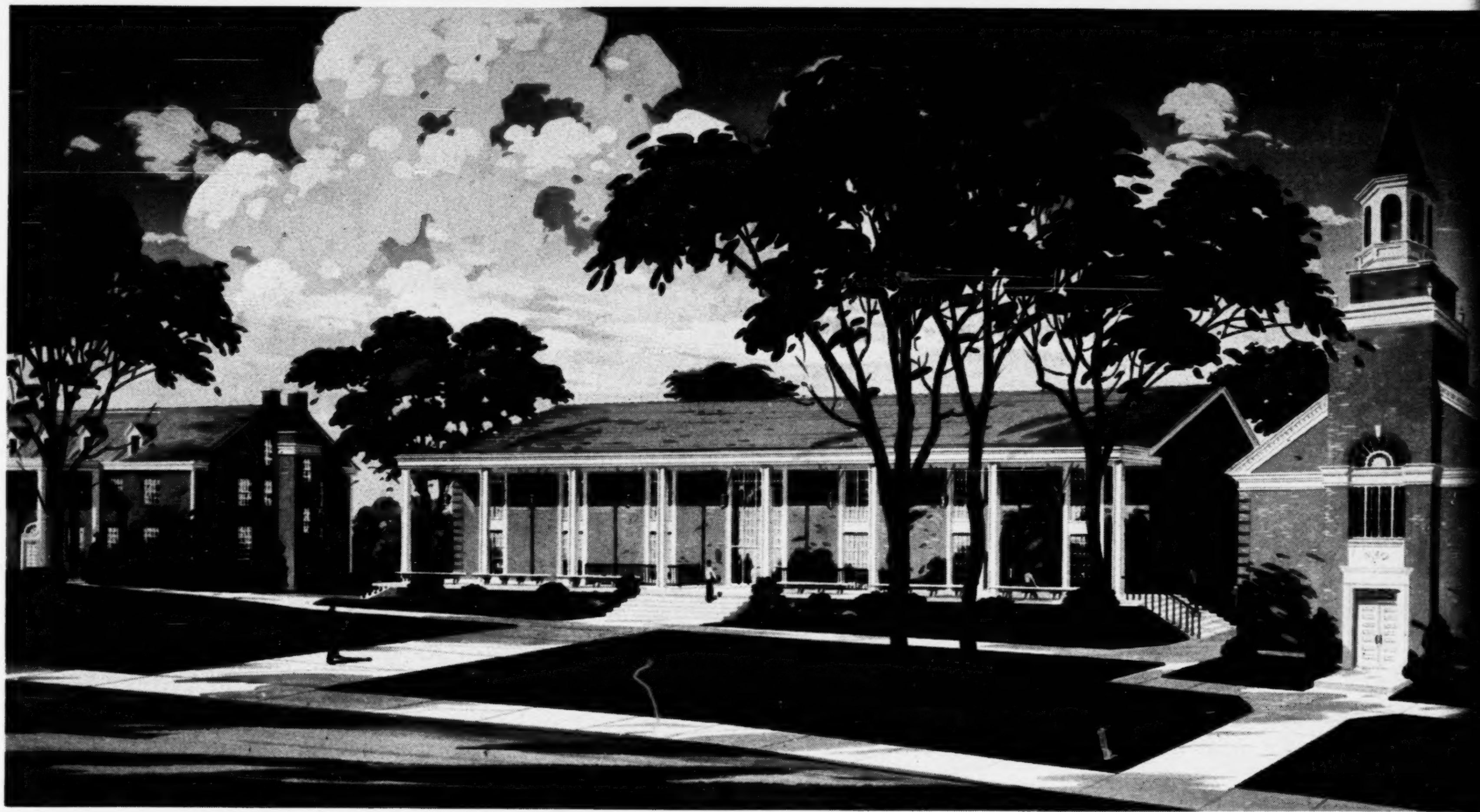
Assistant Librarian: Onra Boshears
Librarian: Susan Schultz
Critic: John P. McDonald, Librarian, University of Connecticut, Storrs, Connecticut

ONRA BOSHEARS

Asbury Theological Seminary is an interdenominational school of theology, governed by a self-perpetuating board and operated on the graduate level. The seminary is located in Wilmore, Kentucky, seventeen miles southwest of Lexington. The seminary was founded in 1923 on the campus of Asbury College, and in 1939 was moved to its own campus. Thus, the library had its beginning in 1939. At that time there were 78 students and 4 faculty members. In 1945, when the first professional librarian was employed, the collection numbered approximately 6,000 volumes and the enrollment had increased to 271.

Since 1945, the library has changed its location three times. Since 1954 it has been on the ground floor of the new Estes Chapel. Quarters consist of a large stack and reading room (117 feet x 49 feet) with a small stack work area and librarian's office. With the collection now numbering approximately 50,000 volumes—in addition to microprint, tape and disc recordings, and pamphlets—the facilities are quite crowded. Limitations of space have necessitated moving the religious educational curriculum materials laboratory to nonlibrary quarters. The reading area provides 100 chairs, but it would be stretching the truth to say that we could accommodate that many readers.

Asbury Theological Seminary Library
Architect's rendering



J. Herschel Fisher & Pat Y. Spillman, Architects

The present enrollment is 326 for the academic year, with approximately 250 in a given quarter. The seminary is planning for maximum enrollment of 400 students, which will probably be achieved in the next decade. The student body represents 26 different denominational backgrounds. The faculty numbers 20 and is expected to increase proportionately.

Seminary objective

The principal objective of Asbury Theological Seminary is the education of men and women for the varied vocations of the Christian ministry, such as pastors, missionaries, chaplains, directors of church and Christian education, and all other forms of Christian endeavor. Many of our graduate students proceed on to advanced studies in other seminaries and universities. Theologically, the seminary falls within the historic Wesleyan-Arminian tradition of Protestantism. The admission of students is highly selective, requiring the B.A. degree. Only a very few are admitted from nonaccredited colleges.

The academic program in the seminary is separated into five divisions. The seminary offers courses leading to the Bachelor of Divinity, Master of Religious Education, and Master of Theology degrees. Only a limited number of qualified B.D. and M.R.E. candidates are permitted to write theses since the degree is not required. All Master of Theology candidates are required to write a thesis. We estimate that when the graduate program is fully established, there will be fifteen to twenty theses in process at one time. The present research needs of the library are modest. However, any seminary concentrating on the Bachelor of Divinity program must not forget faculty research, and many materials are required for faculty research.

Library importance

The library is an integral part of the theological education. It is, indeed, the laboratory of the seminarian. Just as the music student has his studio, the science student his laboratory, the seminarian has his books and reading room. The typical seminarian spends a great deal of his time in the library. In order to assist our students in the use of the library, the librarians are offering instructions in theological bibliography.

In keeping with the Asbury emphasis, Biblical studies and Wesleyana are designated specialized areas in the collection. The whole collection has been tremendously strengthened in the last two years through the library development program of the American Theological Library Association. This development program has been financed by the Sealantic Foundation on a matching basis and has resulted in doubling the seminary's book budget. Most of all, the development project has focused attention as never before upon the role of the seminary library and the urgent need for a new building.

In addition to the seminary and faculty, the students and faculty of Asbury College are permitted to use our library. We estimate that about 250 of the 900 college students use our library more or less spasmodically. We also serve the local ministers and a limited number of other friends in the area without charge.

SUSAN SCHULTZ

In May of 1962 the announcement was made that a good share of the money for a new library building was on hand and planning was to get under way. As a result, my notebook with jottings for more than thirteen years on the building and ideas in relation to it came off the shelf. Committee meetings, interviews, and more planning followed.

Let me backtrack just a little. In June of 1949, just one week after I had assumed my responsibilities as librarian, I was informed that we must immediately proceed with tentative plans to be used for fund-raising purposes. We fell into the pitfall of drawing sketches of floor plans and presenting them to the architect. I now definitely belong to the school of thought which forbids this, as we were taught. I believe we completely stymied our architects. Fortunately, these plans were eventually put into cold storage and, perhaps fortunately for the architect, he retired.

We discovered the first program for the first unit of a new library building at Santa Barbara. I would like to express my appreciation to Mr. Davidson and his corps of workers for this program. I tried various other approaches, but this program really worked out and did not lead me into the frustrations that some others had.

Five basic elements

Their approach was to use the five basic elements: readers services, housing of library materials, staff work area, service area, and special services. Following this scheme, we prepared charts showing desired locations and relationships, estimated quantity, and spatial requirements for the next fifteen and then thirty years.

Our basic consideration in planning the new building was accessibility. There should be a minimum of barriers between books and readers, between readers and services of the staff. The staff views the library as a teaching instrument which is under great obligation to contribute to the academic program of the seminary.

General considerations for the building were spelled out. We asked for a functional building. The building should be flexible and expandable; the architecture should be in harmony with the prevailing colonial style on the campus; the interior should be designed to create a friendly, attractive atmosphere but likewise conducive to serious study.

Since the library was to be located between classroom facilities, it presented to the architect the problem of routing traffic so that the library would not become a thoroughfare. Because of the growing demands for more extended study hours beyond our fourteen-hour day, we asked also for a limited access to the building so that the study hours might be extended for our ambitious students. This was the dream that we presented to our architect, Mr. J. Herschel Fisher.

We made up five charts using each of the basic elements. We showed our requirements as far as space and quantities were concerned and the expected growth in the fifteen- and thirty-year periods. We also showed the preferred locations for these various functions and their relationship to one another. The architect took this chart and summarized the elements for working purposes.

Expandable building

As I indicated, we asked that our building be expandable. Mr. Fisher said that he had explored every possibility on that limited space, such as adding a wing in the back or a wing on either side or both ends, or even raising the roof and adding another floor, but nothing seemed economically feasible. Therefore, we recommended that the school build a shell of a building as big as the plot could take and have our expansion built in. The library, as the architect envisions it, will blend in with the colonial type of architecture on campus and yet in some sense have the atmosphere of a contemporary building.

I mentioned that we had asked for provisions for traffic to be routed between the classroom facilities. The architect planned a covered walkway across the front of the building so that the traffic would not come through the library. It is also the main entrance. Unfortunately, we do have to climb a few steps. The main floor is the middle floor, and from this walkway there are stairs that go down to the lower level which can be used at times when we keep the lower door open. The building will be located on grade so that the main entrance at the front comes out on street level; the back, or ground floor, will come out on grade level.

Main floor

There is vertical circulation on the main floor. The public stairway to the left of the entrance goes to the upper floor. There are also two interior stairways and an emergency exit on grade level. The circulation desk will be immediately visible as the patron comes in, and the card catalog will be opposite the lobby. The administrative offices and work area are to the left of the stairway, behind the circulation desk. In the present setup of the library the librarian supervises the cataloging, and we have an office for the cataloger in the work area.

There is provision for an elevator and janitorial space near the cataloger's office. I believe that the elevator opens in both directions. Immediately behind the elevator, we have the bibliographic and reference section for easy access by both the public and the staff. On the right of the entrance will be our current periodicals. Opposite the circulation desk will be our periodical indexes and to the right of the card catalog will be the bound periodicals.

The furniture layout in connection with these plans does not represent our planning of the furniture layout. In our later layout we have interspersed more readers and stacks so that the readers will not have to go very far from the bookshelves to find a place to sit and read. You will notice the deck on the back of the building. We are not too sure about the wisdom of this.

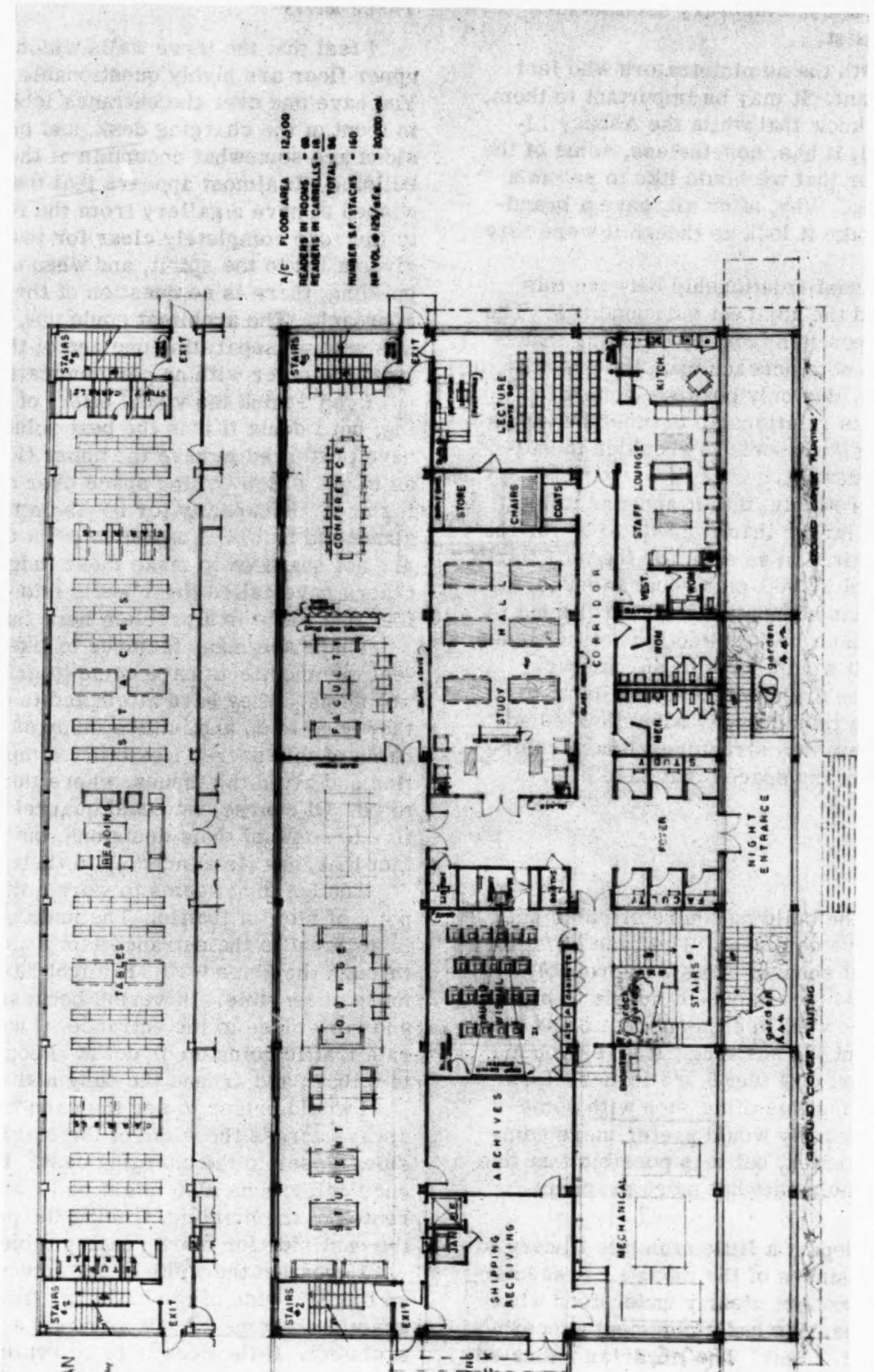
On the upper floor we have built-in expansion with open wells, that could later be closed in to give us additional floor space. In the meantime it gives us a feeling of spaciousness in the building. On the lower floor we have our nonlibrary functions and another feature of built-in expansion. The upper bays will be temporarily used for nonlibrary purposes, and the floor plan calls for enclosed carrels when we take it over for the library.

We asked for limited access to the building. It is possible for us to close or lock doors to the right of the main stairway as you come into the entrance. As a result, we can lock off the lecture hall and staff room or open them for a public meeting.

We are not exactly sure how the study hall will operate, but we are going to try it. It is flexible space and if it doesn't work, we can use it for other purposes. The rest rooms are on the ground floor. Beyond the main rest rooms we have our shipping and receiving section, the mechanical room, and a large language laboratory. We have been busy reducing the language laboratory from the status of a Cadillac to a Model-T Ford. In many libraries such elaborate equipment has been installed that only about 10 percent of it is used. Therefore, we are going to keep it simple.

JOHN P. McDONALD

I would like to review the building from the outside in, paying a bit of attention to the necessities of the site and of the campus which have dictated harmony in the library structure with existing buildings. We all know that this requirement can be pushed beyond reasonable limits, and those of us


GROUND FLOOR PLAN
STAIRS #2
EXIT
LOADING DOCK
SHIPPING RECEIVING
MECHANICAL
ARCHIVES
STAIRS #1
NIGHT ENTRANCE
FOYER
STUDY HALL
CORRIDOR
STAFF LOUNGE
KITCH.
LECTURE
STORE
CHAIRS
COATS
CONFERENCE
STAIRS #3
MEN
WOM.
GARDEN
GROUND COVER PLANTING
STACKS
READING
TABLES
LOUNGE
FACULTY
A/C FLOOR AREA - 12,500

Messina Studios

Asbury Theological Seminary Library
Ground floor

who are enamored of contemporary architecture often attempt to resist.

I sympathize with the administrators who feel harmony is important. It may be important to them, personally, but we know that while the Asbury Library is traditional, it has, nonetheless, some of the contemporary flavor that we would like to see in a new library building. Why, after all, have a brand-new building and make it look as though it were fifty years old?

There is a pleasant relationship between this library building and the adjacent surroundings. The roof line takes its position from the building that is on the left. It does not encroach upon the preeminence of the chapel. My only possible complaint about the site and its relationship to other buildings is that this building does seem to shoulder the adjoining building somewhat.

I must say, regrettably, that it appears to me that the building is larger than it needs to be for the purposes of the institution as seen for the next thirty years. A building of 37,000-plus square feet is going to be more than adequate for an enrollment not to exceed 400 and a book collection not to exceed 150,000 volumes. It would seem to me that we should go back to the architect to advise us as to what administrative thinking may have dictated additional spaces within this structure. I have reference to these nonlibrary spaces that have been referred to.

Gracious spacing

When we enter the building, there are a number of things that deserve comment. The base bays, for example, are 24 feet square. This was probably used as 4 feet, but 24 feet is not—it seems to me—going to work out too well in either direction as the architect has laid out the shelving. It gives you a dimension, on center, of 4 feet 9 3/5 inches. I can see the builders facing this dimension with some wonderment. I personally would prefer more compression in the bookstack, but it is possible that this library can afford the somewhat more gracious spacing.

I would like to depart a little from the library to comment on this business of the module. It seems to me that we have not yet clearly understood what the module should be. We had a comment concerning a module of 25 1/2 feet. The librarian indicated he wanted 36-inch aisles. However, I cannot see how he is going to achieve this without having some columns standing in the aisle every so often. We have to understand what a library module is, and what it is intended to do, before we can ever persuade architects that it is at least as important to us, as their architectural module—which is quite a different thing—is to them.

Three wells

I feel that the three wells which interrupt the upper floor are highly questionable in this plan. You have one over the entrance lobby, one directly in front of the charging desk, and one whose dimensions are somewhat uncertain at the back of the building. It almost appears that the architect wished to have a gallery from the main entrance to the rear completely clear for two stories. This gives a lift to the spirit, and when one enters the building, there is no question of the graciousness of approach. The architect could not, however, achieve this without separating one end of the upper floor from the other with no communication.

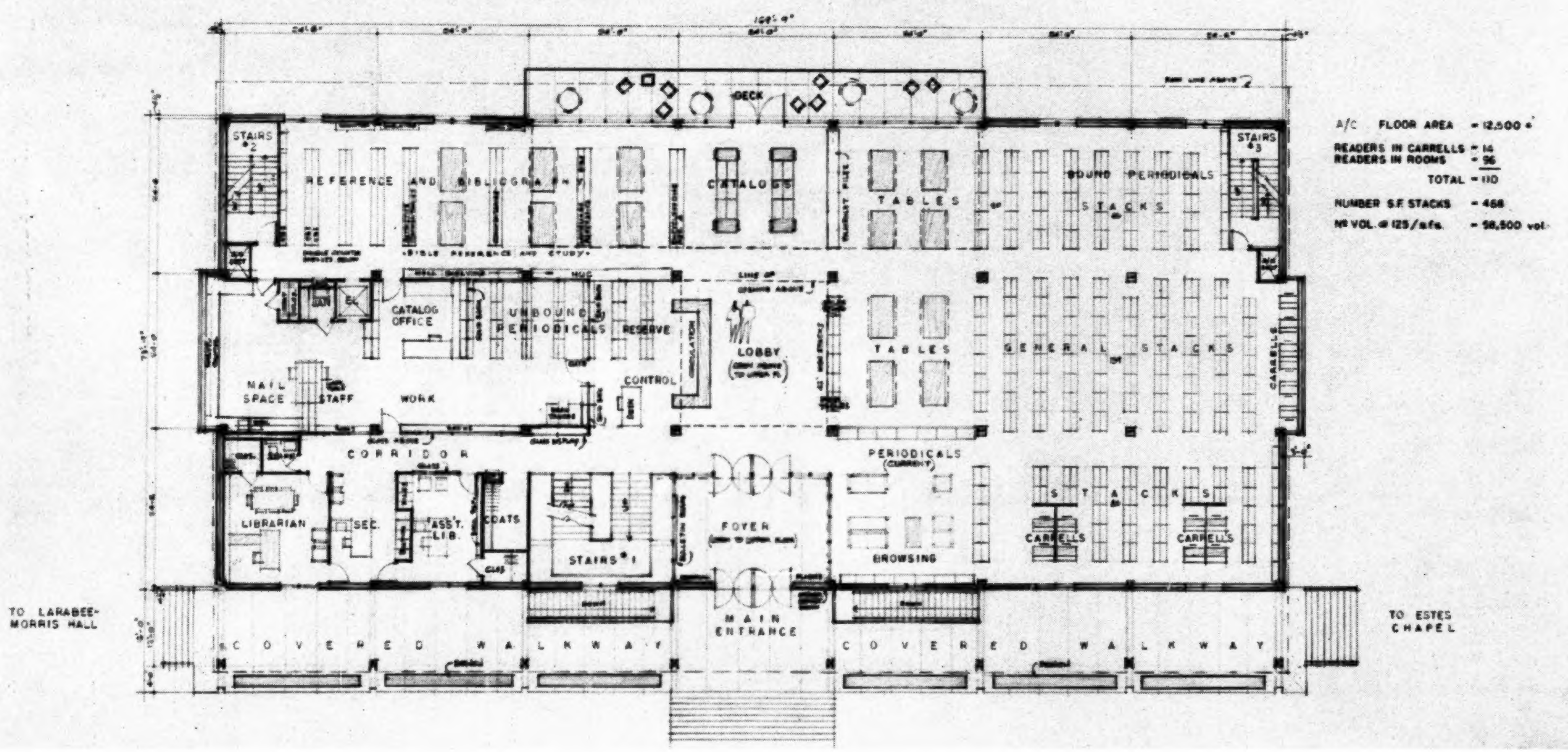
I don't think the visual effect of this is unpleasing, but I doubt if it is the best solution. I would have preferred to have the upper floor designed so as to get a high ceiling space over a pleasant reading area, or capacity for books on the mezzanine above and below. I hasten to point out that architects are not qualified to make these judgments. However, others have called these wells into question, and I do feel that there is a problem here that needs resolution.

There are many features to like and admire. I feel the architects have come to grips with their problems. They have attempted to decide what it is they need to do and, unlike many of us who in the name of this sacred flexibility simply beg the question and avoid the issues, where things are supposed to be. Of course, we could quarrel with them relative to some of their decisions, but I do admire the fact that they have faced up to their problems.

The building seems to work quite well from the point of view of traffic. The main stairway, which is adjacent to the entrance lobby, is clearly visible through the glass wall. It might have been a little more accessible. However, because it is visible and very close to the entrance, it will serve to separate traffic going up or down. People will not have to walk in and around the busy main floor.

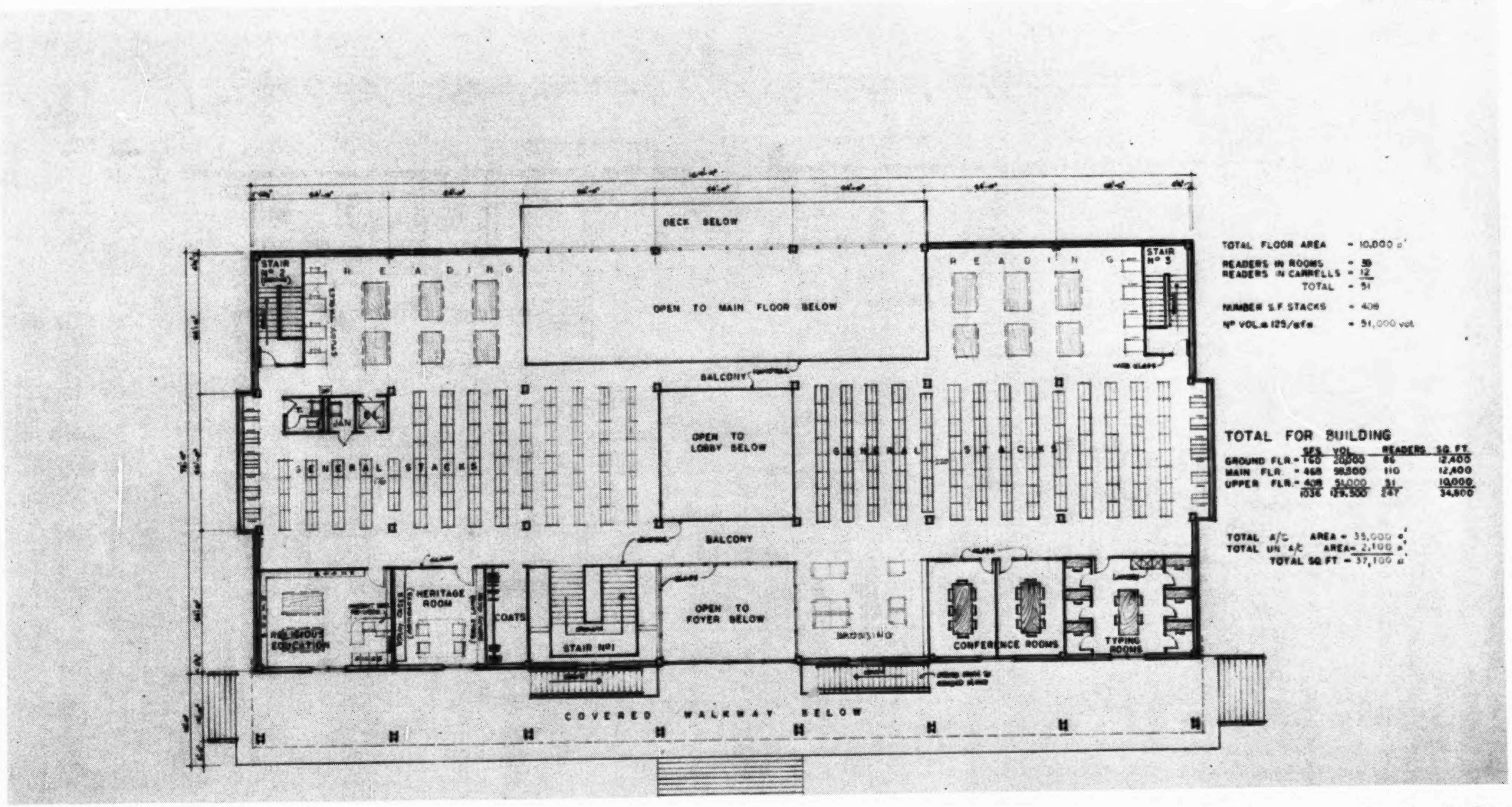
I would prefer to see the card catalog, which is always across the width of the building, at the east side, closer to the charging desk. I feel the reference collections also might be located closer to the center of the building, freeing the present space on the east side for more reading tables.

I question the width of the outdoor reading deck on the east side of the building. This was not a program requirement but apparently a notion of the architect. If the deck is to be retained, I wonder whether an 8-foot width is sufficient with the doors opening onto it. As the furnishings are shown on the drawing, as well as the opening of the doors, I feel it is going to be very difficult to thread your way to either end. If the dimensions are changed, then other openings on the deck would be possible. This point is directly behind the card catalog so that there is a traffic pattern through a place already busy enough.


STAIRS #2
REFERENCE AND BIBLIOGRAPHY
BIBLE REFERENCE AND STUDY
DECK
CATALOGS
TABLES
BOUND PERIODICALS
STACKS
STAIRS #3
A/C FLOOR AREA = 12,500 ☐
READERS IN CARRELLS = 14
READERS IN ROOMS = 96
TOTAL = 110
NUMBER S.F. STACKS = 468
Nº VOL. @ 125/s.f.s. = 58,500 vol.
CATALOG OFFICE
UNBOUND PERIODICALS
RESERVE
CONTROL
CIRCULATION
LOBBY
LINE OF OPENING ABOVE
MAIL SPACE
STAFF
WORK
GENERAL STACKS
CARRELLS
CORRIDOR
LIBRARIAN
SEC.
ASST. LIB.
COATS
STAIRS #1
FOYER
PERIODICALS (CURRENT)
BROWSING
CARRELLS
TO LARABEE-MORRIS HALL
MAIN ENTRANCE
COVERED WALKWAY
TO ESTES CHAPEL

Messina Studios

Asbury Theological Seminary Library
Main floor


DECK BELOW
OPEN TO MAIN FLOOR BELOW
READING
READING
STAIR Nº 2
STAIR Nº 3
STUDY CARRELS
BALCONY
BALCONY
OPEN TO LOBBY BELOW
GENERAL STACKS
GENERAL STACKS
JAN
OPEN TO FOYER BELOW
STAIR Nº1
COATS
HERITAGE ROOM
RELIGIOUS EDUCATION
CONFERENCE ROOMS
TYPING ROOMS
COVERED WALKWAY BELOW
TOTAL FLOOR AREA = 10,000 □'
READERS IN ROOMS = 39
READERS IN CARRELLS = 12
TOTAL = 51
NUMBER S.F. STACKS = 408
Nº VOL.@ 125/sfs = 51,000 vol
TOTAL FOR BUILDING
SFS VOL READERS SQ. FT.
GROUND FLR. = 160 20,000 86 12,400
MAIN FLR. = 468 98,500 110 12,400
UPPER FLR. = 408 51,000 51 10,000
1036 129,500 247 34,800
TOTAL A/C AREA = 35,000 □'
TOTAL UN A/C AREA = 2,100 □'
TOTAL SQ. FT = 37,100 □'

Messina Studios

Asbury Theological Seminary Library
Upper floor

Special features

The building has special features on the ground floor—features that are not library functions. I like the idea of placing a study hall there which is accessible after the library closes. On the other hand, it does seem to me expensive to extend library hours to serve this need. The objection to study halls is that they are not supervised and are noisy, and we do not solve our problem by them. However, apparently the sort of students this institution attracts does not pose the same kind of supervision problems that others of us face. The study hall should work out well in this location.

Having an entrance on the ground floor does pose some control problems for daytime operation of the library. What is to prevent the student in the library from coming down and going out this door during the daytime? I am assured that this door can be locked, but I think not sufficient consideration has been given to the requirements of the fire marshal. I suspect he will insist that the main artery be kept open, and perhaps the solution will be panic hardware. Nevertheless, it is a prominent entrance, and I would expect the architect to resist the unsightly panic hardware that has to be attached to the exit.

There are a couple of minor items that I would like to mention. There is a cloakroom on the main floor just north of the stair well. This is a questionable feature. It is not in an obvious location and will not be utilized. I wonder if coat-hanging facilities could not be provided elsewhere in the building in a more general location.

As in many of the buildings we have seen presented at this Institute, we have fairly substantial windows to contend with. There is an emphasis in the program on the use of natural light. I share the psychological attachment to natural light, but I feel the sun can be troublesome in the library. What provision is going to be made for the substantial glass areas, particularly on the east side of the building?

DISCUSSION

Question: I have seen 22-foot square modules, 23-foot, 21-foot 6-inch, and 22-foot 6-inch. I have also seen a 27-foot square module. I would like more discussion on this subject.

MR. McDONALD: So would I. I do not have any special wisdom to convey except that it seems to me that too few of us have grasped the fact that architects have been working with modules for years. There has been some harmony between the architectural modules and the building bay. I think that is the term that Mr. Heiliger used, and it is a good one. It avoids confusion.

Comment: With regard to the wells that Mr. McDonald mentioned, it is fairly safe to say that it is more economical to build a floor than to leave them open. The costs of the railing around the well, the finishing, and the hydraulic lift necessary to change light bulbs or tubes in the area above the well should be considered. The only justification for them is aesthetic appearance, and if that is valid, it is sufficient.

There is also the problem of a complete division of the flow of traffic at the second-floor level. Mr. McDonald pointed out that the wells cut the second floor in half, and if this doesn't coincide with your planned division, you may have a problem.

MR. McDONALD: I did not call the wells into question strictly on the ground of economy. I believe in architecture and, if the wells are justified aesthetically, then perhaps they can stand. My criticism really is, on the aesthetic basis, more of a question than a criticism.

Memorial Library
University of Notre Dame

Notre Dame, Indiana

STATISTICAL DATA

Architect: Ellerbe & Company, St. Paul, Minnesota
Type of library: Academic
Population to be served: 6,477
Area: 429,780 square feet
Book capacity: 2,058,650 volumes
Seating capacity: 2,997; planned for 3,345
Cost: $8,500,000 (tentative)
Cost per square foot: $19 (tentative construction cost)

PRESENTATION OF PLANS

Director of Libraries: Victor A. Schaefer

VICTOR A. SCHAEFER

The University of Notre Dame was founded in 1840-42 by priests of the Congregation of the Holy Cross. It is in Notre Dame, Indiana, contiguous with the northern limits of South Bend, an industrial center of 132,000 people, approximately ninety miles east of Chicago. As a metropolitan center, the area numbers nearly 175,000 inhabitants.

Prior to 1920, the University included a preparatory school in which more students were enrolled than in the college departments. Until 1929, an elementary school also was conducted on the campus. Before 1920, a student could receive his entire education at Notre Dame, beginning with the kindergarten class.

There is now an undergraduate school, the graduate school, and the law school. The undergraduate school comprises the freshman year of common studies with 1,462 freshmen and four colleges: arts and letters with 1,721 students; engineering with 804 students; business administration with 929 students; and science with 496 students. The law school has an enrollment of 138 students.

Total enrollment during the spring semester of 1963 was 6,477 students. In addition, there is a summer session of six weeks, which usually enrolls about 3,200 students. The graduate school has an enrollment of 827 full-time students, and an additional 122 students are enrolled in the evening classes. More than 90 percent of the students enrolled in the summer session are graduate students.

The graduate school consists of twenty-five departments. The M.A. is awarded in ten, the M.S. in twelve, the Ph.D. in twelve, the Doctor of Science degree in one; and the Mediaeval Institute gives the degree of Doctor of Mediaeval Studies. At the June, 1963, commencement exercises forty-five doctoral degrees were awarded.

The administration's policy is based partly on scholastic aptitude tests, partly on personal interviews and recommendations. The 1962-63 freshmen averaged 555 on the Scholastic Aptitude Test, verbal, as contrasted with a national average of 479, and 606 on the Scholastic Aptitude Test, mathematical, as contrasted with a 527 national average. Although applications for admission continue to increase, the undergraduate enrollment is limited to approximately 5,500 students. We do not intend to grow, at least not according to present policy. It is expected that the graduate enrollment will be limited to about 1,000 bona fide full-time graduate students. There also is a strong probability that only graduate students for whom the Ph.D. is the terminal degree will be admitted.

A number of special research programs are in progress at Notre Dame. There are the Lobund laboratories in germ-free life research, and the radiation chemistry laboratory which carries on research involving the effects of radiation on matter and the behavior and properties of radiation. Also, there is the Mediaeval Institute; the Committee on International Relations which sponsors research in contemporary international political problems; an East European and Soviet Studies Program; and a program in African Studies, expected to begin shortly. The Maritain Center is devoted to research in the work of Jacques Maritain.

Today, the University encompasses a 1,000-acre campus and comprises approximately seventy buildings of all types. The majority of the buildings have been erected in the past ten to twenty-five years.

Library system

The focal point of the library system is the new Memorial Library of 487,935 volumes. Other libraries in the system are: biology, 21,844 volumes; chemistry-physics, 48,694; mathematics computer, 7,536; geology, 3,000; engineering, 25,922; and architecture, 8,339. The law library contains 63,306 volumes. As of June 30, 1963, the library resources available on the Notre Dame campus added up to 666,856 volumes.

The total enrollment at the University will probably not go much over 7,000 students. The undergraduates will in all probability comprise about 75 percent of the student body. The undergraduate has been the center of our interest. The college library portion of the Memorial Library can seat nearly 44 percent of the total undergraduate student body. In terms of total student body and total library seating, the Memorial Library can at present accommodate 46 percent of the student body.

The researcher and the teacher have not been overlooked in planning the building. Thus, 394 graduate students and faculty can be accommodated in the high-rise portion. An additional 194 faculty offices in the basement of the Memorial Library are accessible without using library entrances.

The program for the architect required that a portion of the building, specifically the most accessible portion, be designed for the undergraduate. The College Library, as it is called, is designed to house books likely to be most frequently used because of classroom oriented and motivated needs at both the undergraduate and the graduate level.

The concept of the undergraduate library as a limited collection of fixed size, meeting only the minimum requirements of the undergraduate, has been considerably enlarged in the Notre Dame concept. The idea is to provide the undergraduate with a broad collection of up-to-date library materials such as can be found in the library of a high-quality liberal arts college. The College Library collection will be rigorously weeded and little-used books retired to the research library. We feel that this concept of the College Library is essential to support the University's program of academic excellence. The undergraduate must be provided with the books, services, and facilities which are essential for independent study and independent research required by this program.

Ford Foundation grant

The University of Notre Dame is one of the first five American universities chosen by the Ford Foundation for its special program in education. The Ford Foundation will give Notre Dame $6,000,000 if the University obtains at least $12,000,000. Happily, this goal has been exceeded.

The Memorial Library is 13 stories high, and the entire building rises to a height of 210 feet. The total square feet of floor space is 429,780 square feet. The south phase of the highest-rise portion is flush from the ground up, and there will be a granite mural which will be constructed of 140 different kinds of granite from 90 different quarries all over the world. A reflecting pool, 7 feet 6 inches x 137 feet, is in the front of the building. The first impression you get of the building is one of massiveness but a rather simple design. The second impression is that you want to go around the building to see some of the artwork which is underneath the cornice. The cornice extends 9 feet off the ground floor; the forepart is granite panels into which the art is sandblasted and filled with gold leaf. The art is symbolism from the Old Testament.

The general orientation of the building is south. One approaches from the south through a paved entrance court. On the left is the treasure room, and on the right the auditorium-lecture hall. We will be moving in on August 5, 1963. I think that the progress made in construction of the building is near a miracle.

On the first floor the simplicity of the exterior design is reflected in the interior design. There is an absence of rooms or barriers to limit the full use of the collections by the students. The building is 315 feet in each direction, and the long vistas are broken up by placement of stacks. Other view-breakers are the cubicles and ordinary tables.

We have a center entrance to the library, and a west and an east entrance. We will have revolving doors because the architect tells us that the pressure generated by the air conditioning would make it nearly impossible to open a regular hinged door.

Main entrance

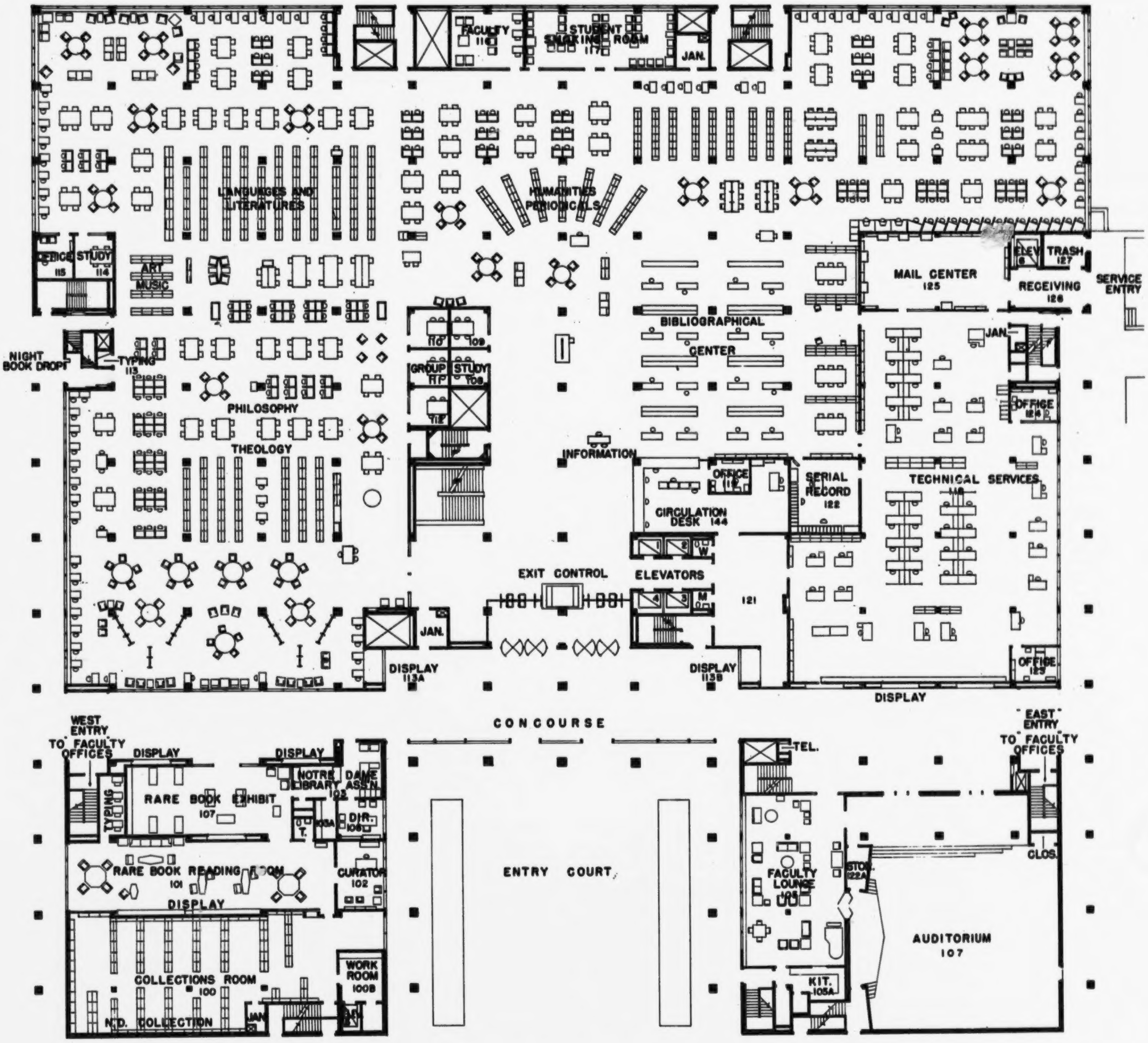
As you come in, on the right you will notice four elevators and ahead of the elevators a circulation desk. Beyond the circulation desk is the bibliography center with divided catalogs. The catalogs on the right wall are our collection of national and trade bibliographies. This will be moved out from technical services so that the books or trade bibliographies will be available for graduate students working in bibliography courses.

On the left there is a carpeted area which is called the new acquisitions browsing area. I always felt, during my days at college as a student, that I never got to see the books that went into the library. Therefore, we are going to have a display area. We intend to put all of our new acquisitions, excluding bound periodicals and items of that sort, as well as rare books in this section so that they can be examined by the readers.

Ahead of the new acquisitions browsing area are the stacks comprising the philosophy and geography section, surrounded by reading tables. There are tables on the side in groups of double phases of three's. They are not exactly carrels but cubicles with dividers. Our experience is that most of the students like to study by themselves, and we hope that the 52-inch-high dividers will provide individual places.

Beyond this section is the art and music section with tilt-top tables. If you wish to consult large folio-size art books, you do not have to lean over them; you can lift the table top up and bring the books to you. Along the range of stairs is a section for languages and literature.

We have a smoking area and a faculty reading room. The faculty asked to have the reading room provided. If they read out in the open bay, they find


FACULTY 116
STUDENT SMOKING ROOM 117
JAN.
LANGUAGES AND LITERATURES
HUMANITIES PERIODICALS
OFFICE 115
STUDY 114
ART
MUSIC
NIGHT BOOK DROP
TYPING 113
GROUP
110
109
STUDY 108
112
PHILOSOPHY
THEOLOGY
INFORMATION
BIBLIOGRAPHICAL CENTER
MAIL CENTER 125
ELEV
TRASH 127
RECEIVING 126
SERVICE ENTRY
JAN.
OFFICE 124
OFFICE 118
SERIAL RECORD 122
CIRCULATION DESK 144
TECHNICAL SERVICES
EXIT CONTROL
ELEVATORS
121
JAN.
DISPLAY 113A
DISPLAY 113B
OFFICE 123
DISPLAY
CONCOURSE
WEST ENTRY
TO FACULTY OFFICES
DISPLAY
DISPLAY
NOTRE DAME LIBRARY ASS'N. 103
RARE BOOK EXHIBIT 107
TYPING
T.
DIR. 106
CURATOR 102
RARE BOOK READING ROOM 101
DISPLAY
COLLECTIONS ROOM 100
N.D. COLLECTION
JAN.
WORK ROOM 100B
ENTRY COURT
TEL.
EAST ENTRY
TO FACULTY OFFICES
FACULTY LOUNGE 105
STOR. 122A
CLOS.
AUDITORIUM 107
KIT. 105A

Ellerbe & Company

Memorial Library, University of Notre Dame
First floor

that someone is always at their elbow, asking, "How am I doing, Professor?" In connection with the smoking areas, we do not have any objection to smoking. Smoking could be handled by the engineering facilities of the building. At the moment we are a bit afraid of the maintenance involved in supplying and replacing ash trays. I think eventually we are going to have to break down and allow smoking throughout the first two floors.

Procedures

We are attempting to set up a procedure whereby all librarian heads will be involved in doing acquisitions, cataloging, and reference. We also hope to have very strong liaison with our faculty, the college of arts and letters, and the business administration school. This will be possible because we have 194 faculty offices in the basement, outside of library jurisdiction and control. They are accessible to the faculty twenty-four hours a day with no need of going through the library entrances. The book collection will not be accessible to the faculty.

There is an unassigned space which will probably be used for our mechanical systems when we introduce them in the library. We are going to employ a programmer who is using the Univac 1107. He will start programming some of the library operations. At the beginning we are only doing this in connection with circulation.

We have a lecture hall seating 300 and in front of that a reception lounge. There will be an opportunity for coffees or teas and to meet the lecturer and so on. The hall is not intended to be an auditorium, but simply a lecture hall. It will probably draw a crowd smaller than we can handle in the three auditoriums we have on campus and yet too large and notable to put into a classroom.

The rare books room is divided into parts. There are a number of display cases. There is a display room and reading room, and adjacent to that the office of the curator. Below the reading room is what we call our collection room. We expect collections to be given to us, and we have promised donors that if they have enough rare books to fill one section, we will keep them intact and put their name on top of the door.

The area that we have on the first and second floors will house approximately 90,000 books. The part of the basement under the treasure room area is for the University telephone exchange.

We have a central main stairway. It is rather small, and I have raised questions about it. Along the side walls are some double stairways. These will go from the first to the second floor, and from the second floor they will lead to the outside. It is a sort of a scissors stairway, but you cannot go from one stairway to the other. We also have an emergency stairway going into the corridor; it has a closed door which is wired and alarmed.

The total seating capacity on the first floor is 778. This is reader seats and does not include offices. It also has a capacity of 68,750 volumes.

Second floor

The entrance to the second floor is through the three communicating stairways, by the elevators, or by the main stairway. To the left is the history section. In the center are the periodical collections for this floor, and to the right are the stacks for the social sciences and the general sciences.

We have not moved the general sciences into the main building. In fact, when we talked to the physics faculty about moving in, they made a survey which indicated that the physics library should never be merged into the main library. However, we want to develop an undergraduate collection in science, or, as one of our faculty members calls it, a science collection for the educated layman. I am sure that we will not be able to do this as well as we would like to—that is, withdraw all the science books which are used by the undergraduates from the branch libraries, withdraw all the reserve reading books from the branch libraries, and limit the branch libraries strictly to research collections. Saying this and being able to do it, I am afraid, are going to be two different things.

We can seat 74 people in the audio center. They will be listening to stereophonic sound systems by earphones only. Controls will be in another area. We will have 74 listening centers and 15 channels, either turntables, tape decks, or FM radio. The system will be used to pipe music, not through the library, but up to the penthouse lounge, which is something I will come to eventually. It also can be used to pipe music into the auditorium on the first floor.

Most of the study rooms are for 4 people. There are a few larger, and they happen to be that way because that is the way the module divided up. When we were visiting libraries a few years ago, we were advised not to make the study rooms too large because one or two boys would be likely to get in and elbow everyone else out of the way. Therefore, we purposely made them the same size. They are all accessible from the center of the building, and so we think that persons moving back and forth into the group study rooms will not bother the students sitting in the open.

The service desks are a little away from the entrance. We have a service and reference desk for the history section, the periodicals, the social sciences, and the general sciences.

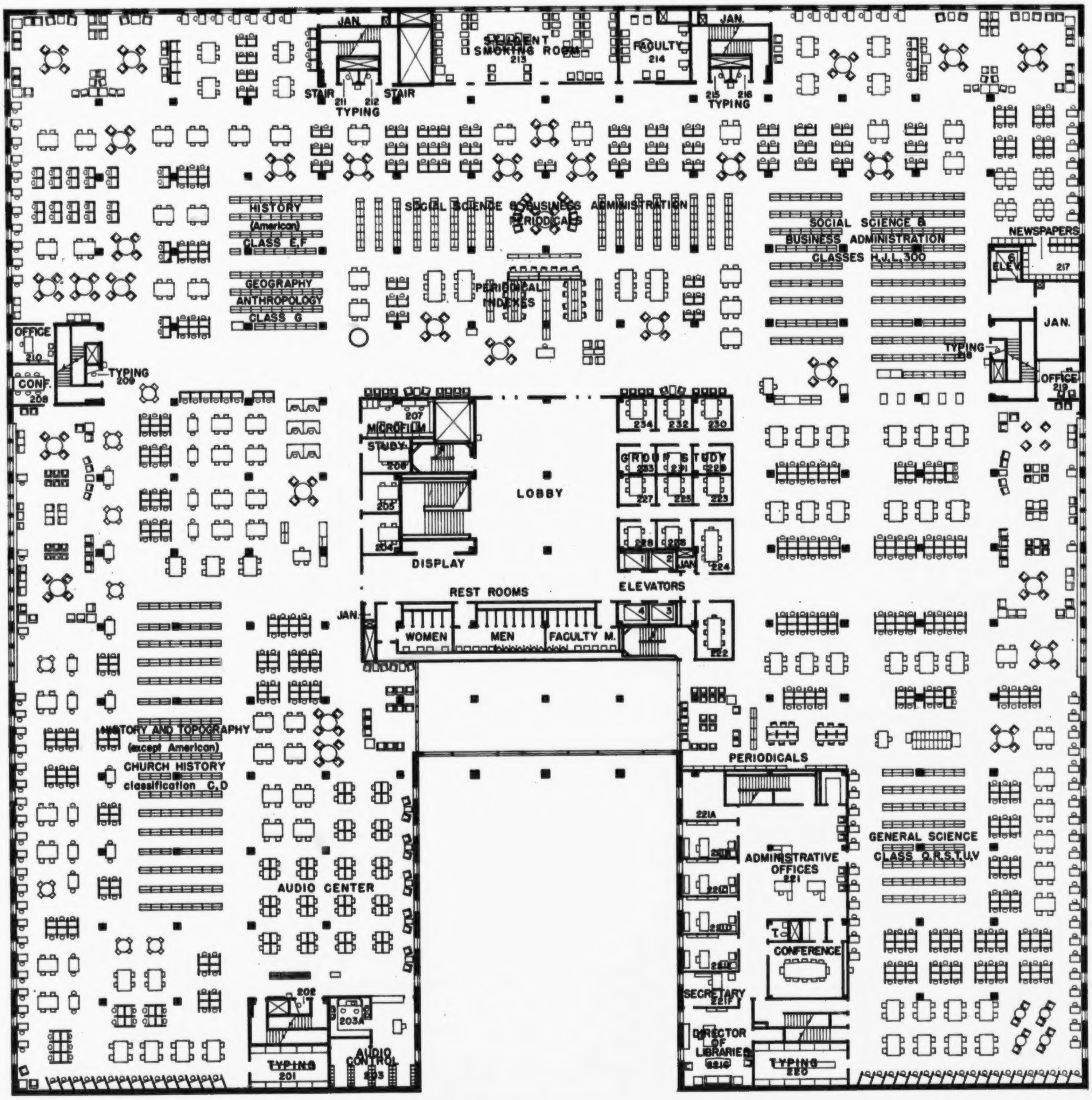
In the periodicals area are T-shaped groupings of furniture—periodical indexes with raised shelves. We intend to have only one file in each section; the back files will be on shelving immediately to the back. The chairs at the periodical index tables will be swivel because there is a lot of coming and going to the periodical indexes and we think that the moving of chairs back and forth will be noisy.

There is a two-story lobby. As on the first floor, the large room is for a student smoking room, and the smaller room is for the faculty reading room.

Fourth floor

The fourth-floor plan is typical. We have not filled in all the stacks. We have put in only alternate stacks. When completely stacked, each floor will hold 185,000 books.

We have closed carrels around the room. They are very small compared to the carrels that one usually finds in a university library, but since we have offices for the faculty in the basement, we do


JAN.
STUDENT SMOKING ROOM 213
FACULTY 214
JAN.
STAIR
211 212 TYPING
STAIR
215 216 TYPING
HISTORY (American) CLASS E,F
SOCIAL SCIENCE & BUSINESS ADMINISTRATION PERIODICALS
SOCIAL SCIENCE & BUSINESS ADMINISTRATION CLASSES H,J,L,300
NEWSPAPERS
ELEV.
217
GEOGRAPHY ANTHROPOLOGY CLASS G
PERIODICAL INDEXES
OFFICE 210
CONF. 208
TYPING 209
JAN.
TYPING 218
OFFICE 219
207 MICROFILM STUDY 206
205
204
LOBBY
DISPLAY
234 232 230
GROUP STUDY
233 231 229
227 225 223
228 226
JAN
224
REST ROOMS
ELEVATORS
JAN.
WOMEN
MEN
FACULTY M.
222
HISTORY AND TOPOGRAPHY (except American) CHURCH HISTORY classification C,D
PERIODICALS
221A
ADMINISTRATIVE OFFICES 221
GENERAL SCIENCE CLASS Q,R,S,T,U,V
AUDIO CENTER
CONFERENCE
SECRETARY 221F
DIRECTOR OF LIBRARIES 221G
TYPING 220
202
203A
TYPING 201
AUDIO CONTROL 203

Memorial Library, University of Notre Dame
Second floor

not think we have to provide offices in the tower. Consequently, there are only 45 square feet of carrels, which we think is enough for the graduate students and others working on research projects.

We are not going to assign the open carrels permanently. We are going to assign book trucks to the graduate students who do not qualify for the locked carrels. The graduate students can take materials back and forth and sit at any desk that happens to be vacant. From our experience in our present building, and from our discussion with librarians with whom we visited, we found that the frequency of use is very small. We think that we can get about three and four times the use by not assigning the carrels permanently. Also, from what I see in the present building, where we have a few carrels, they are very untidy. I do not think this procedure will harm the graduate student. Those studying for comprehensives or those doing research papers for the master's degree can use this system without difficulty.

The sixth floor is like all the other floors, with the exception that there are quarters for the archives. We have rather extensive archives, and we have allowed room for plenty of growth.

I would also like to point out that each floor has a seminar room which can seat 14 students. Some of our faculty members had thought they could run classes in these seminar rooms and thus relieve the pressure on the undergraduate classes. However, we made them much smaller so that we did not have to serve any classes. As you know, classes in a building such as this, with approximately 140 people streaming in and out all day long, would cause noise and confusion.

One particular seminar room on the sixth floor has special construction because it is a seminar room for the music department. It contains a slide projector, a blackboard ruled with staffs, and also a spinet piano so that if students are working on projected microfilm or manuscripts they can pick up the music on the piano. Other floors do not have this type of treatment.

On the twelfth floor we have quarters for the *Review of Politics* group. We thought, when we planned this building, that we would be free of all the tenants. However, we not only have what we had but have likewise picked up one more in the process. Other areas are for the European Soviet Studies and the headquarters for the Committee on International Relations.

DISCUSSION

Question: I believe that on the second floor there were some anchored tables; is that right?

MR. SCHAEFER: Yes. Those are cubicles which are fastened to the wall, and the idea is the same as that of the partition. You will find the same treatment on the first floor, above the technical services area, and also on the second floor in the lower left front wall.

Question: What kind of book control do you have?

MR. SCHAEFER: We have 6 turnstiles: 4 for entry and 2 for exit. They will be connected by a rope —which can be an emergency relief measure— and, therefore, serve as emergency exits if we require them.

Question: As I understand it, you will have 4 people at the exit?

MR. SCHAEFER: No, we will have 2 people at the exit. They are right inside the revolving doors.

Question: What is the total seating on the second floor?

MR. SCHAEFER: The total seating on the second floor is 1,633. The volume capacity is 142,000 volumes.

Question: Do you have a closed reserve anywhere?

MR. SCHAEFER: No. We have reserve shelves along with all of the other books. We have been doing this for about eight years now. I don't think we have lost any more reserve books in this fashion than we have in connection with the closed group.

Question: What do you do when you have a run on one or two books?

MR. SCHAEFER: I should point out that besides the normal equipment at each of the reference desks, there is also a locked-door bookcase where we can have books under control during special runs on the night before exams or something like that.

Question: What is the ultimate potential capacity of the library—how many volumes?

MR. SCHAEFER: The ultimate capacity is slightly over 2,000,000 volumes. I should also mention that there are three floors which are now unfurnished. Our present seating capacity is 2,997 in the entire building. When we finish off the other floors and have more stacks and more carrels, this will jump to 3,400.

Question: What kind of floor covering do you have?

MR. SCHAEFER: On the first floor there is Armstrong Rubber Tile, and on the top, as well as in the foyer, we have vinyl asbestos.

Question: Do you have freestanding stacks on each floor? Do you have multitier stacks anywhere in the building?

MR. SCHAEFER: No.

Question: Had you considered multitier stacks as they did over in Rochester many years ago?

MR. SCHAEFER: Yes, we did consider multitier stacks, but we did not use them because we felt that this building should be kept highly flexible.

Question: What is the size of your bay?

MR. SCHAEFER: It is 21 feet 8 inches.

Question: Where do you park the book trucks for the graduate students?

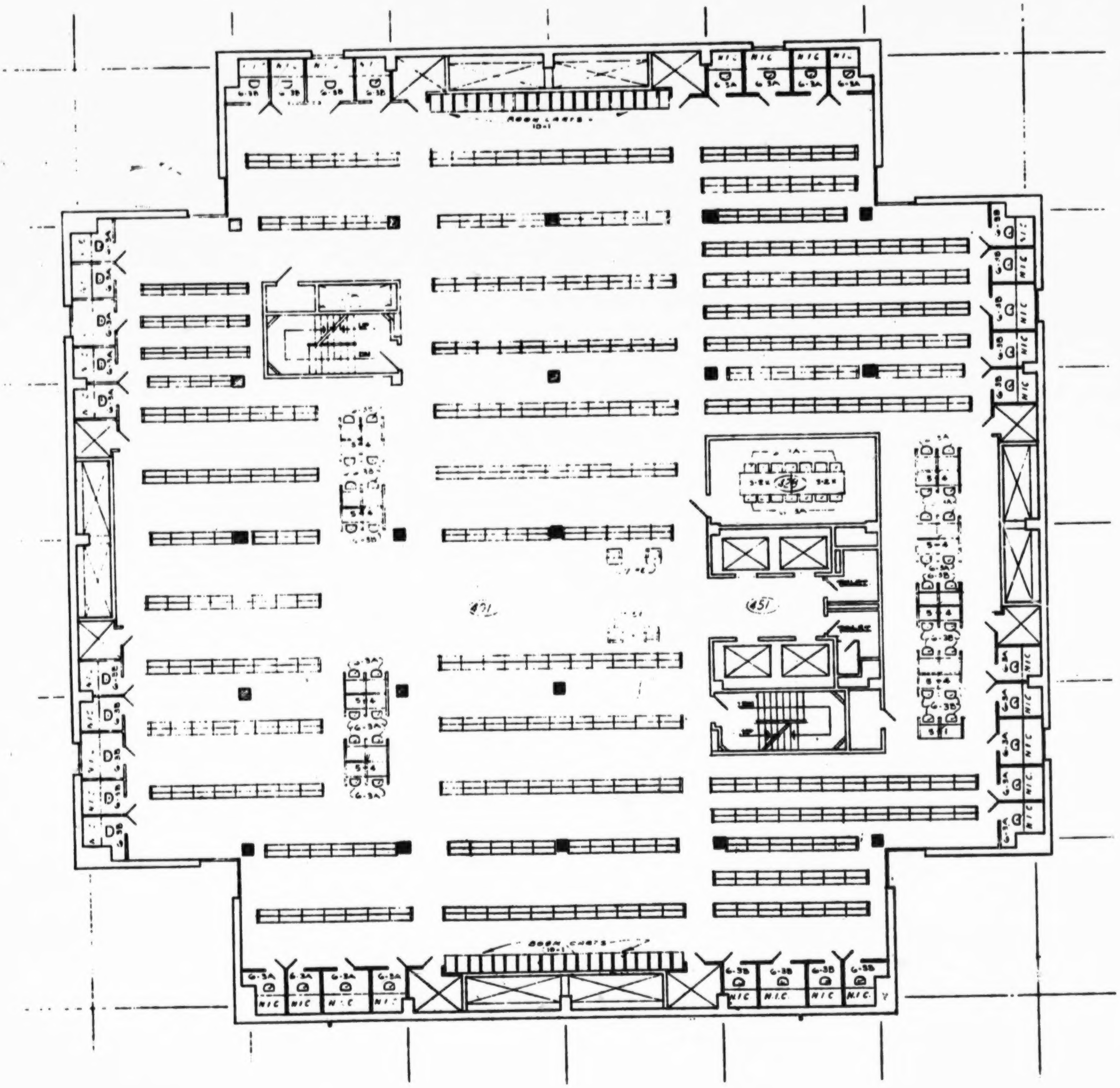
MR. SCHAEFER: They are on each floor.

Question: How many professional librarians do you expect to use to service each floor?

MR. SCHAEFER: I have added fifteen new positions, which now gives me a total of around 47 professional positions on the staff as a whole, including the branch libraries.

Question: What hours are you open?

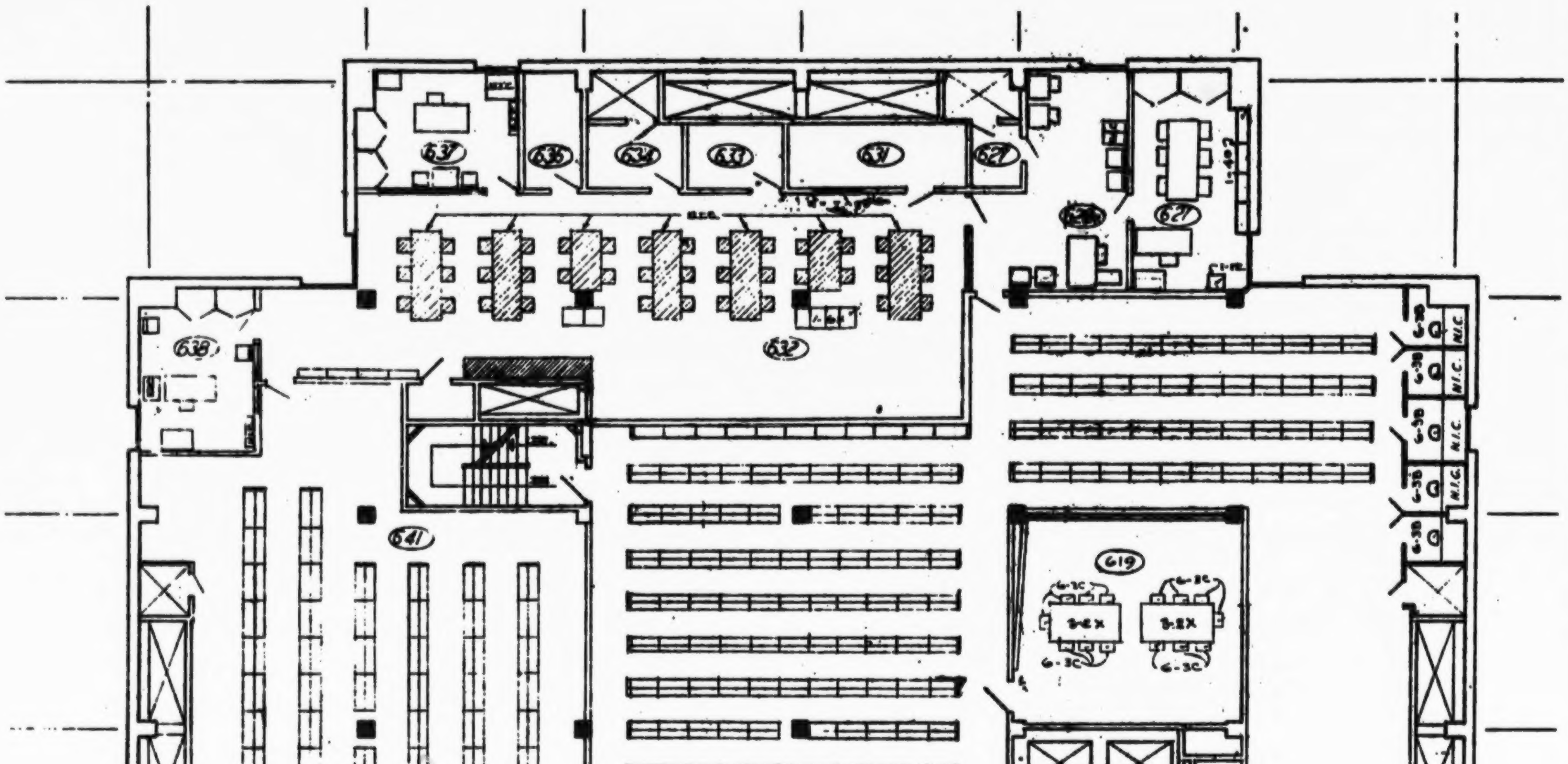
MR. SCHAEFER: We have library service from eight in the morning until ten at night, the library being open until eleven-thirty. We will probably continue with this procedure. We were also discussing whether or not we should stay open until one or two o'clock in the morning. The President would like us to stay open this late.



Memorial Library, University of Notre Dame
Fourth floor

This would run afoul of disciplinary policy, as we have a curfew at midnight. Therefore, I don't know what the situation is. At the present time it is contemplated that we will suspend library service at ten o'clock but that the library will be open. We plan to have a staff of three persons who will patrol the building all day long in order to see what is going on. Of course, whether or not we will continue this indefinitely will depend upon the financing.

Question: The size of the cataloging and seating area, it seems to me, is comparable to that of



Memorial Library, University of Notre Dame
Sixth floor

acquisitions or recently received books on the left-hand side of the building. I think that is on the main floor; is that right?

MR. SCHAEFER: Correct. There was a very simple factor that influenced what kind of a building we would have and also our access to it. The President wanted to have a building which would be the dominating building on the campus, and I think we have that. I don't think anybody will mistake where the library is or which building the library is. It is not quite so tall as the dome but nearly as tall. However, it is beginning to overshadow the dome. As you drive along the toll road, or come in by the main road, you hardly notice the dome any more, which, of course, has been our trademark in the past. Also, because we have only one access, the north road, we therefore have to group the technical services near that access. That is why we have put the receiving and technical services areas about two bays below the north wall.

Question: What does the total project cost?

MR. SCHAEFER: Equipped and everything, I am told that it will exceed $9,000,000. Our furniture and equipment was $850,000, and the building started out at $7,000,000. Our President speaks of the building as costing $12,000,000, but I think he is adding to it all of the other costs involved with regard to preparing the site and redoing the power house. As I indicated, the building is air-conditioned throughout and, as a result, this did mean extensive remodeling and increase of the power plant. We are going to have a central air-conditioning system on that side of the campus, which will also be used for all of the other new buildings to go up. I think that our President arrived at the cost of $12,000,000 on that basis.

Question: I am an architect, and I would like to ask what is probably a naive question. When one designs a legitimate theater, if it exceeds about 1,000 seats, it is not used because people would rather watch television. In that same connection, when does a library begin to reach a scale where it will do better as two or three separate buildings?

MR. SCHAEFER: I am sure I do not know. As I pointed out previously, the undergraduates will always be the predominant population on the campus—70-75 percent, according to the present policy. However, as to what the president or faculty directors in the future will do about this, we have no way of ascertaining. I do not know whether it is cheaper to have two buildings when you have $9,000,000 to spend or not. There is a great deal of interchange between the undergraduate collections and the graduate and research collections. The collections were not exclusively designed for one use alone. I am sure that all of you have senior students in your college who were possibly better equipped from their freshman year to use research materials than perhaps some entering graduate students. We feel that insofar as the cost of maintaining collections is concerned, insofar as the cost of maintaining a building is concerned, this library fulfills the purposes we had in mind.

Question: I am the second uninitiated architect here. I think that what bothers the previous speaker and myself is the fact that if we were designing a theater and we had to run 500 people through an entrance during a ten-minute period between acts, we would not handle it that way. We have built a baseball stadium where 500 people go in through a series of gates, possibly four or five gates. Of the 1,700 persons, theoretically, who could be in the library at one time, how many do you think would come into the building during the ten-minute class break? Could you guess? Could anybody guess? Of course, I am not being critical of the building; I am merely attempting to use it as a basis for discussion as to some of my worries.

MR. SCHAEFER: We had thought about several exits, but then we were faced with the cost of establishing extra control points.

Question: As I looked at the plans, I noted that you had two revolving doors. How many people, at a peak, do you think would come in between classes? I am speaking now about those in the center area. Would you say that there would be 500 people coming in at a peak ten-minute class break?

MR. SCHAEFER: Basing the number solely on the number of students that come to the library, I would say perhaps 100 at the moment. I hope that this will increase; it will probably triple and quadruple. At exit time during the evening, the passage of people is much greater. I should point out that, in addition to the revolving doors, we likewise have four hinged doors.

Question: With 1,700 people here, let us say at lunchtime—they will not all interchange at that time, but would not the number that do be a milling mass of people?

MR. SCHAEFER: Of course, when we say that we are building a library that will seat 2,997 people, we likewise have the strength of our convictions that there will be 2,997 people using it. Obviously, however, we are not building for today but for tomorrow and, therefore, I suspect that if we get half that many today, we will be doing well.

Comment: But this lobby has already been built in, and it would be difficult to change in connection with future patterns. You see, to the architectural way of thinking, a building that takes 1,700-2,000 people needs a kind of milling-around space of some dimension. This would have to be pretty large. Perhaps Mr. Metcalf can comment on this.

MR. METCALF: This is not just a question of 1,700 people. There are nearly 4,000 people who will come out at this one exit and through this one place.

MR. SCHAEFER: The only entrance to the library proper is right here, and we do have 2,997 people in the entire building, including the carrels and facilities for study. We will have to add several hundred office people in connection with our offices and those of the Institute.

MR. METCALF: This is a very important question.

I do not know the answer. I know that in the Lamont Library, where we may have 1,400 persons in the building at one time, we arranged for six doors at the front and three at the side. This gave us six check-out points. Of course, we also know that it takes longer to go out than to go in, because you have to check as you go out. However, at Harvard we have never had to use the six. The most that we have ever used has been four, and I think it is very unusual even to use more than three. Generally, it is one entrance except during the rush hour and Saturday afternoons.

Question: How long does it take to check out? I presume you are opening brief cases and receptacles of that nature. You know that in the theater tickets cannot be taken in fast.

MR. METCALF: It depends on how you do the checking-out. This is a very important factor. I think that there should be at least four check-out points. I would not want to get along with less than that.

MR. SCHAEFER: We can put in an almost unlimited number of check-out points in addition to the desk which is there. For instance, if we have a great many people checking out, we can drop one of the cords and make a more or less portable check-out point there also.

MR. METCALF: I likewise think that your problem is complicated by having these revolving doors, which, of course, take up more space than a regular door. Of course, you have plenty of room. Forty-two feet is certainly enough if you can use it all for doors. However, you have reduced that amount of space by having the revolving doors.

Question: There will be hundreds of people going in and coming out of there. What would be your objection to a stair which could be used to go to the upper floors and thus relieve part of the drain on that lobby?

MR. METCALF: I am sure the objection would be that you would simply have to have another check-out point.

Question: I would like to raise a question about the second-floor plan. The thing that disturbs me is that you must have 600-700 people walking back and forth here all the time. I think it is all right to say that these people are at desks—that there are only a few disturbed. However, what do you gain by this enormous concentration? Could not this wing be on another floor, thus forcing the students to go down into a common check-out? As it is presently arranged, there will be almost a continual flow back and forth all day long. Is there some reason for this great concentration on this wing? Is it not possible to break this up into units on different floors rather than creating this great mass of space, with galloping crowds all over the place? I don't understand it.

MR. SCHAEFER: Obviously, there are several ways of building a library. I disagree with the statement as to this great mass of people milling around and creating a lot of noise. I just do not buy that. As you come into these various areas, you come up on lifts and then, if you are going to work there, you mainly sit there and you leave by the same route. If a person is in another part of the library and desires to go upstairs, he comes up only at the end in which he is interested. You do not have to come down through the central stairs or use the elevator.

We have purposely left some of our aisles rather large so that the traffic pattern which the student should take would be fairly obvious. If he is coming off the left section, he then takes either the elevator or the nearest stairway to the next area he desires to visit. If he has to go to the central area, he then goes through the lobby, which is about 2,000 square feet. There will be a merging of these various persons, but there will be a moving-around which is not going to bother other people.

Comment: I would like to second the concern about the movement of people within a space in which readers are attempting to study. Baldwin-Wallace College has a library which is laid out on a principle similar to the one we have just seen. It is a modular plan with interspersed areas for reading and for stacks. I spent a day in that library watching what happened, and I came away very much concerned about the interference which takes place as soon as a single person moves in a space where people are reading. It is very disturbing.

In that particular library, a single person merely coming to the desk to ask a question in a low voice caused 40 readers to look up. This likewise happened anytime that anyone moved. Now, this was in a library that was so arranged that it was possible to control the reading space from the desk.

I think this is a serious question and something which has a bearing on all modular library plans. I am less concerned about large masses of people moving about than I am about individuals who, by the slightest movement, appear to disturb others in the area who are attempting to read.

MR. SCHAEFER: The service centers are very well isolated with shelving and things of that sort. We have an overhang at the desk with two chairs in front so that students will not have to shout to the librarian, but can carry on a conversation in a modulated voice. We think that the size is going to cut down a lot of the noise because, at least on the second floor, you are dispersed over an area of some 90,000 square feet. To make yourself heard over that spacing, I think you are going to have to raise your voice to a considerable pitch. The person studying down at one end does not know what is going on at the opposite end, which is some 445 feet away.

MR. METCALF: I would like to say that I am very glad we have had this discussion. There are three questions involved. The first question is that of getting people out of the building quickly and without having a huge crowd in the lobby. The second is a question of getting people out of the building in connection with a circulation and traffic pattern so that they will not disturb others as they move around. The third is whether you can actually have a building of this size which will not be so complicated that its use will be discouraged. I think that these are three major problems which require careful study. I am not ready to suggest an answer for any of them, but those of you who are building very large libraries must keep all three in mind.

Comment: There is one other problem I would like to bring up. I believe we have to keep the masses out of the research collection and have, rather, an expandable collection for the undergraduate students. I believe this point has been overlooked.

MR. SCHAEFER: If we have a top-notch collection of 200,000 volumes on the first two floors, we see very little need for masses of students to use the research collections. This is why we planned a large area, so that we can have a large undergraduate library and keep it separate from the research collection. We can close this area off if we desire, but we must try this method first. The solution may be like water—the students may seek their own level. Maybe they will want to go to the tower. However, I do not think we will have to legislate them out of the tower. If we have to, we can program the elevators so that they will be restricted to particular sections.

University of California Library

Riverside, California
(Increment No. 1)

STATISTICAL DATA

Architects: George Vernon Russell & Associates, Los Angeles, California
Type of library: Academic
Population to be served: 3,350
Area: 52,658 square feet (first increment)
Book capacity: 300,000 volumes (combined buildings)
Seating capacity: 865 (combined buildings)
Cost: $1,070,000
Equipment: $170,000

PRESENTATION OF PLANS

Librarian: Gordon Martin
Architect: Hideo Matsunaga

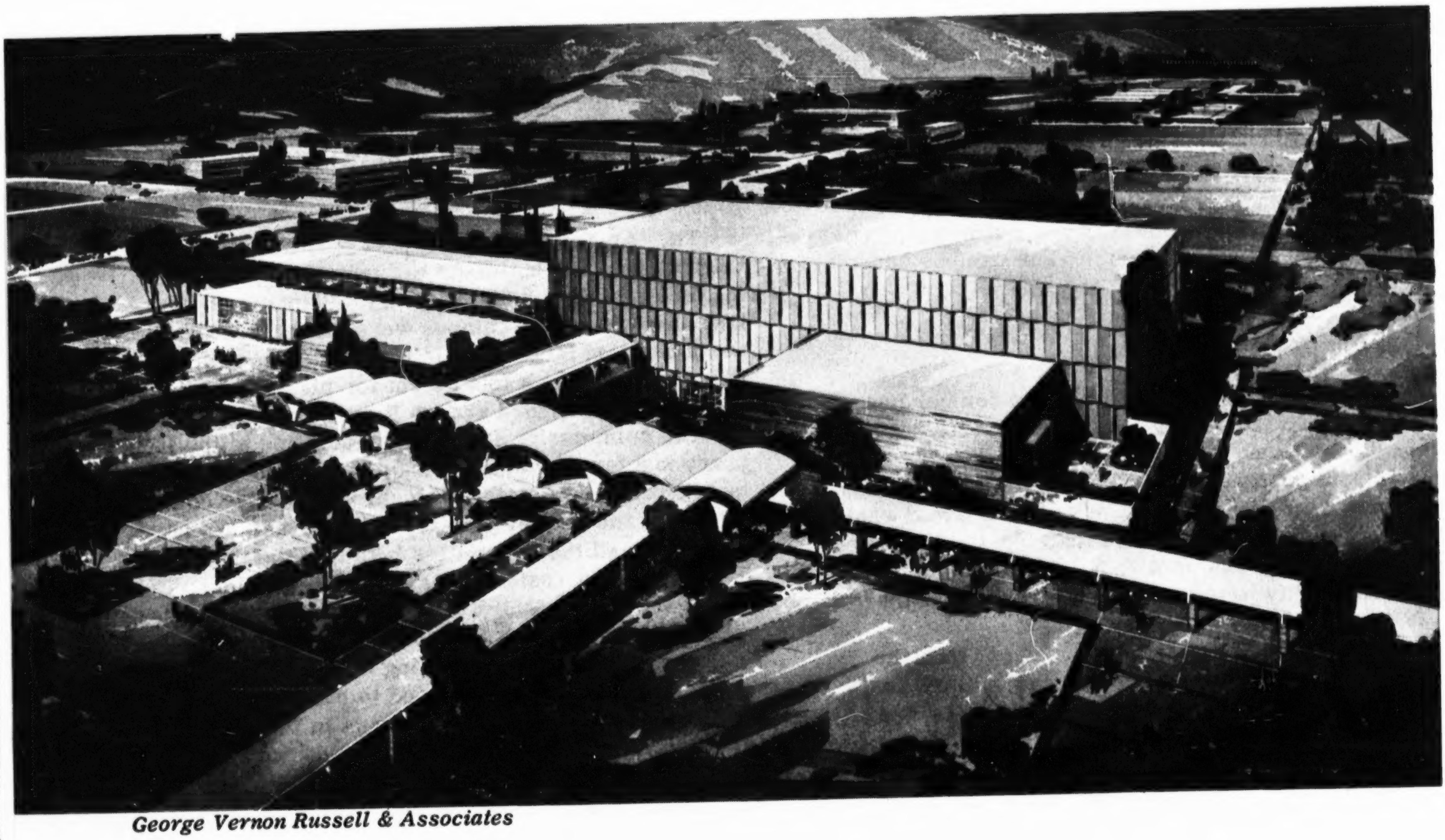
GORDON MARTIN

I am no longer the librarian at this institution, but for the last four years I have been intimately involved in the planning of the new addition. The University of California has a number of campuses. There are seven at the moment, with three more in the development stage. The University campus at Riverside is one of the smaller campuses. It was first opened in 1954 as a college of liberal arts, and was literally an experiment in this massive university complex.

Some thought had been given to the idea of having a small liberal arts college in a more or less rural setting, with a maximum attendance perhaps of 2,000 students, giving almost tutorial education within the scope of a huge state university. In 1950, a chancellor was appointed, and plans were begun for a small campus at Riverside. This was formerly the site of the Citrus Experiment Station, one of the world's famous research organizations in subtropical horticulture. The Station had a campus of some thousand acres outside of Riverside. A portion of this was allotted to the college of liberal arts.

There were certain delays as a result of the Korean War. However, by 1954 the college was opened in a complex of five buildings, one of which was the library. The librarian was the second person appointed to this new college campus. By the

University of California Library, Riverside
Architect's rendering
of ultimate library facilities



George Vernon Russell & Associates

time we opened the library, we had approximately 30,000 volumes, a capacity of about 150,000, and no plans, really, to go beyond 200,000 volumes. This was to be the limit to serve a maximum student body of 2,000. When we opened the campus, it contained 132 students and I think something like 90 faculty members. The enrollment did go up, and we now have about 2,000 students.

However, by 1959, the board of regents decided that this was rather expensive education. The Riverside campus, as well as the other smaller campuses —Santa Barbara and San Diego—were determined general campuses. They were to have graduate training and possibly several different schools on each of the campuses. This caused quite a shift in the planning for the entire Riverside campus, particularly in connection with the library.

The library building was built as a low two-story structure and intended to have an additional wing at some future date. There was no idea of housing any large number of books or readers. During the past three years, the program at Riverside has included seventeen fields for the master's degree and fourteen fields for the doctorate. We had to shift our thinking considerably in the acquisition of books and provision of services in the new library.

The Riverside library, at the moment, has two branches. One is a physical science library with a capacity of about 10,000 volumes, located in the science building separate from the University library. The other is in the new library on the second floor. It is the Citrus Experiment Station Library and numbers about 30,000 volumes. Future plans for it include location in a separate wing of the new college of agriculture building being planned for the Riverside campus at the moment. There are no plans for additional branch libraries.

Mountains are to the back of the Riverside campus. A freeway is the main link between Los Angeles, directly east of Riverside, and the Palm Springs desert area to the west and south. The campus occupies acreage on both sides of the freeway.

First addition

The present addition will be step number one. Two further additions are to come at some future date, the next one perhaps at about 1967. The total complex is designed for 1,000,000 volumes and approximately 2,600 readers. We wish to avoid what happens to so many libraries that add small sections at a time. They end up with a nonfunctioning building which they may have to abandon and begin again with a new building.

When the 1959 decision was made to turn the Riverside campus into a general campus, we could not see any reasonable way of expanding the library. We wished to abandon the building. The University, however, hardly ever disposes of a building. We were talked out of it, and had to present to the architects a building which was never intended to be large and ask them to figure out a way to expand efficiently.

The wing (on the old building) was originally intended as a periodicals reading room. It is now used as such but ultimately will become a reserve books room. We will open it at night; in other words, it will be open twenty-four hours a day. By the use of an internal wall we can seal off the rest of the building and leave the reserve room as an empty, lighted study for use of students living off campus.

The outdoor reading rooms were designed in connection with the original building, and they are quite attractive, containing plantings and so on. Unfortunately, they are rarely used. There are not enough trees to shade them properly. Students do not find it comfortable to read in the outdoor areas. Also, there is quite a lot of wind, and the original building did not provide for enough wind shield. On the back of the building we had to add sunshades to the windows. It faces east, and in the morning the sun beats on the windows.

The problem we face is shifting from a small liberal arts college, with rather limited services and completely open stack collections, to the possibility of serving a quite heavy graduate enrollment in a very large campus. This is the problem we turned over to the architects.

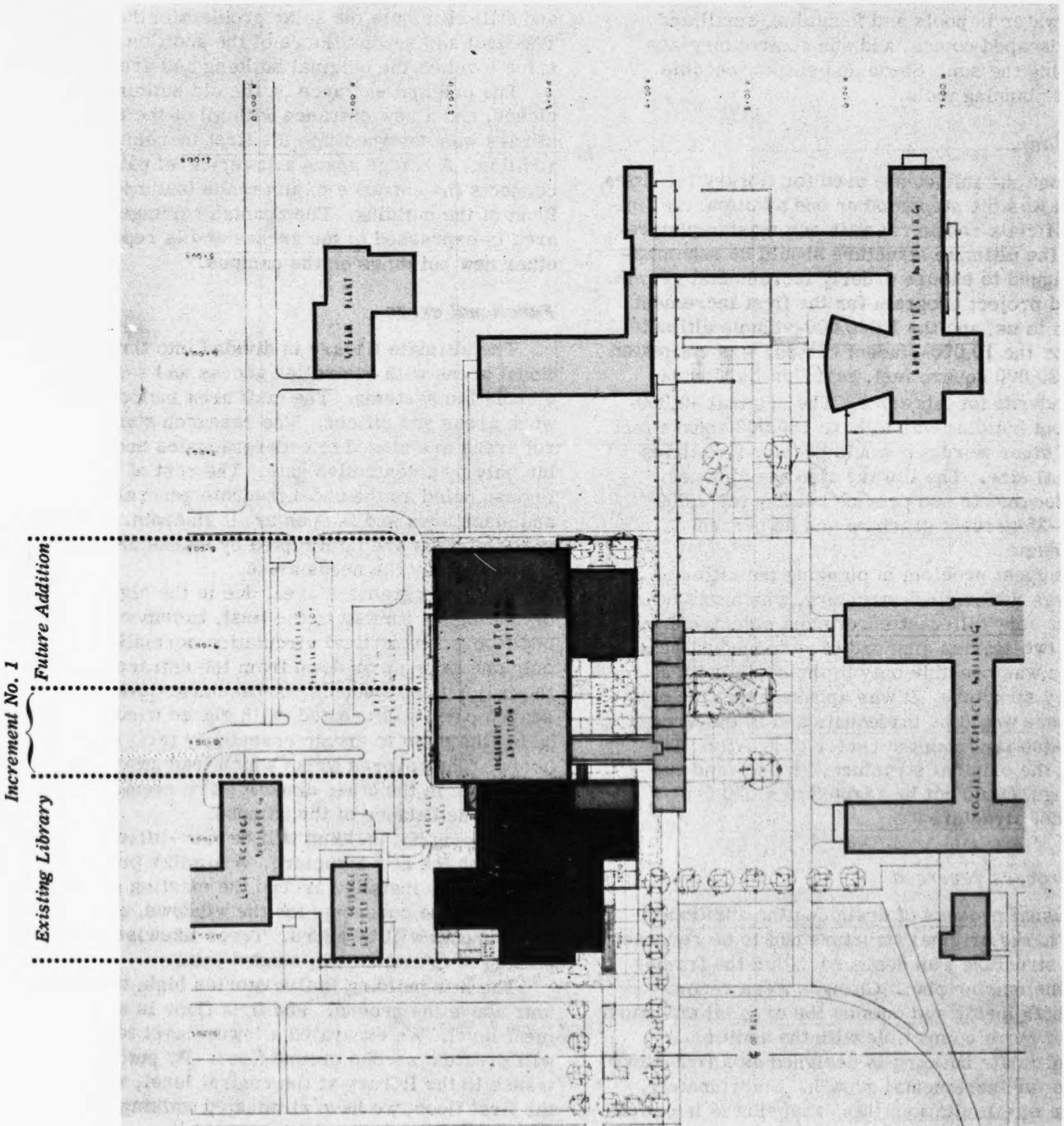
HIDEO MATSUNAGA

I think that a brief history of the relationship between our office and the University of California at Riverside should be helpful. George Vernon Russell, a Fellow of the American Institute of Architects, was appointed as the consulting architect for the Riverside campus in 1959. One of our first assignments was to prepare a master plan for the development of the campus for a future enrollment of 10,000 students.

The campus at this time was only six years old, but both site and buildings had been designed for a maximum of only 2,000 students. Planning objectives for the larger campus were often limited by these existing facilities. In the master plan, the library serves as a focal point for planning, and the campus was designed around it as its heart.

The commission for the first addition to the library and for a schematic master plan for the ultimate library was awarded to our office after completion of the master plan for the campus. We have also designed the humanities building, the theater complex, and a residence hall for 800 students. Currently we are designing the life science addition, step number two. We feel fortunate to design these major structures incorporating the many principles of design and planning included in our master report.

Riverside, as you may know, is in the semidesert, arid interior of southern California where rainfall is minimal, and is subject to severe desert winds. The


Existing Library
Increment No. 1
Future Addition
STEAM PLANT
HUMANITIES BUILDING
SOCIAL SCIENCE BUILDING
LIFE SCIENCE BUILDING
LIFE SCIENCE LECTURE HALL

University of California Library, Riverside
Plan of existing library, addition, and future addition

region is likewise rich in Spanish history. Such an environment calls for the use of covered walks and arcades, water in pools and fountains, small and large landscaped courts, and sun control on glass areas facing the sun. Shade and shadow become important planning tools.

Master plan

Although the immediate need for library facilities expansion was the step number one addition, the University officials concurred with our master plan report that the ultimate structure should be schematically designed to ensure orderly incremental growth. A detailed project program for the first increment was given to us, and the 1,000,000-volume ultimate library for the 10,000-student campus was estimated to total 220,000 square feet, based on California state standards for libraries. The original 40,000-square-foot building was to have 180,000 square feet added; in other words, it would become five times its original size. The library also would house 300,000 documents and provide seating for 2,600 students—25 percent graduate and 33 percent undergraduate.

The biggest problem in planning the ultimate library was the original structure, which was designed for very different enrollment objectives. It was only two stories high and of very modest scale. Expansion was possible only to the south, with a multistory structure. It was apparent that the original entrance would be inadequate and in the wrong location—too far from the center of gravity. The design of the original structure, its one- and two-story wings, could not be adapted to a 220,000-square-foot structure.

Design process reversed

The usual process of designing the addition to conform to the original structure had to be reversed. The new structure was designed within the framework of the master plan. Changes were recommended both inside and outside the original structure to make it more compatible with the addition.

The ultimate building is designed as a five-story structure for incremental growth. Unfortunately, due to the site limitation, this expansion is in one direction only. The structure is Type I construction of reinforced concrete with exterior walls of precast concrete panels. Those on the south end of the first increment will be demountable and reusable on subsequent additions. The secondary wings are designed for brick, thereby aesthetically tying in with the original building. All floors are supported by columns based on a module of bookstack ranges and compartments, permitting sensible use of space on any floor.

Windows are kept to a minimum, being narrow slots between concrete panels, glazed with dark gray glass. These small windows, we feel, are sufficient to give the occupants an awareness of the outdoors and still eliminate the solar problem in the library. The first and second floors of the addition are on the same level as the original building and are continuous.

The original entrance on the old building was closed, and a new entrance with all of the related facilities was designed into the first increment of the addition. A bridge spans a lower-level patio. This connects the entrance to an arcade featured in the front of the building. The Spanish heritage of the area is expressed in the arches and is repeated in other new buildings on the campus.

Functional areas

The ultimate library is divided into three functional areas with controlled access and segregated circulation systems. The staff area includes all the work areas and offices. The research stack and carrel areas are closed to undergraduates and accessible only by a controlled gate. The rest of the library is designated as the undergraduate general seating and stack area and is open to all students. Small reading areas are interrupted by stacks and can be rearranged as the needs arise.

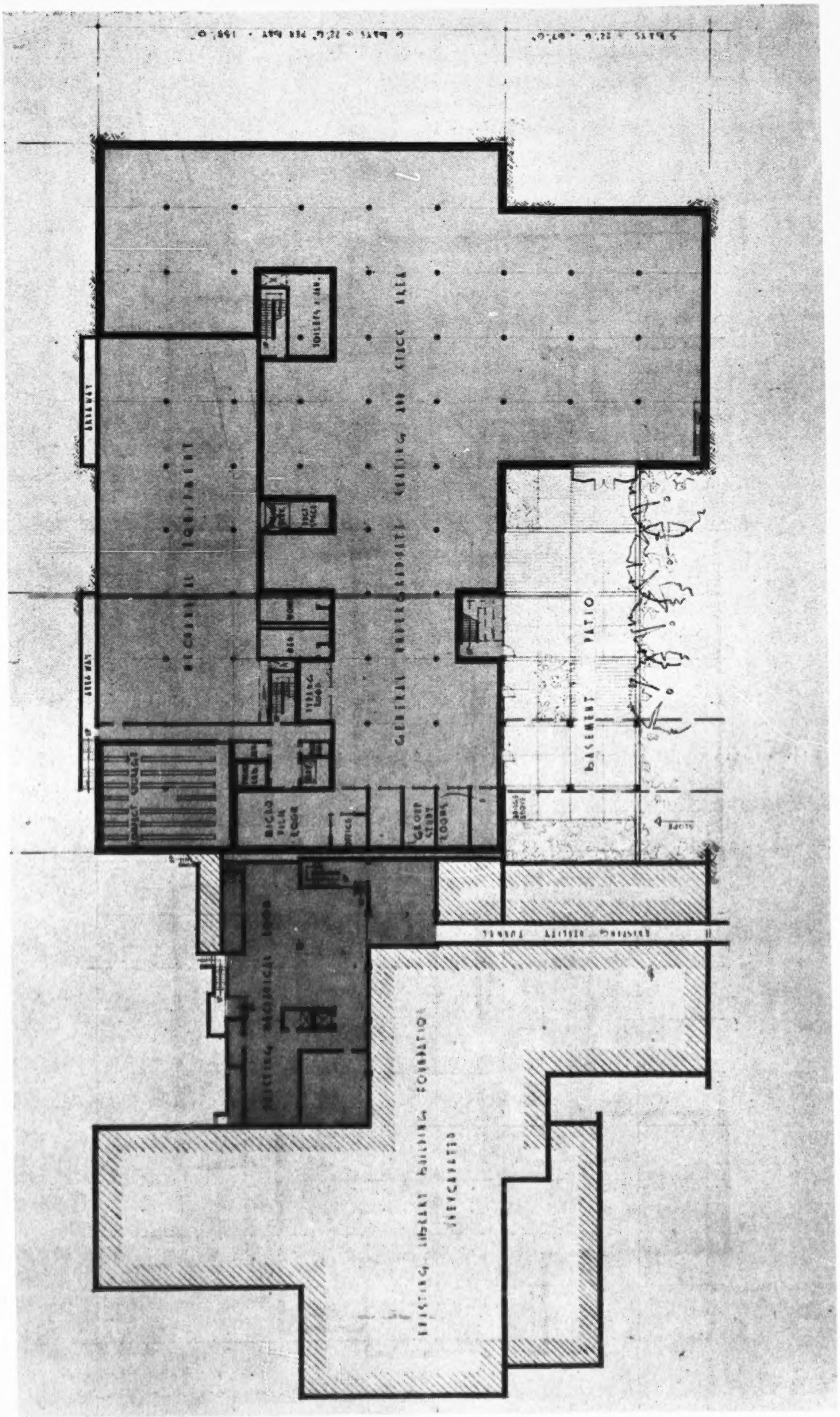
The undergraduate area, due to the higher density of seating, is limited to the first, basement, and second floors. A vertical circulation normally will be only one floor up or down from the entrance floor for the majority of students. A basement-level landscaped patio was created, with glazed windows facing the patio to create essentially two ground floors. The covered walks which lead away from the arcade in the other direction are eventually to tie into the balance of the campus.

The original building will be face-lifted to conform with the new structure. A similar precast panel will be installed around the existing portico. There will be coverings for the windows, and a reflecting pool will be added. Trees likewise will be planted to create a cool, shaded patio.

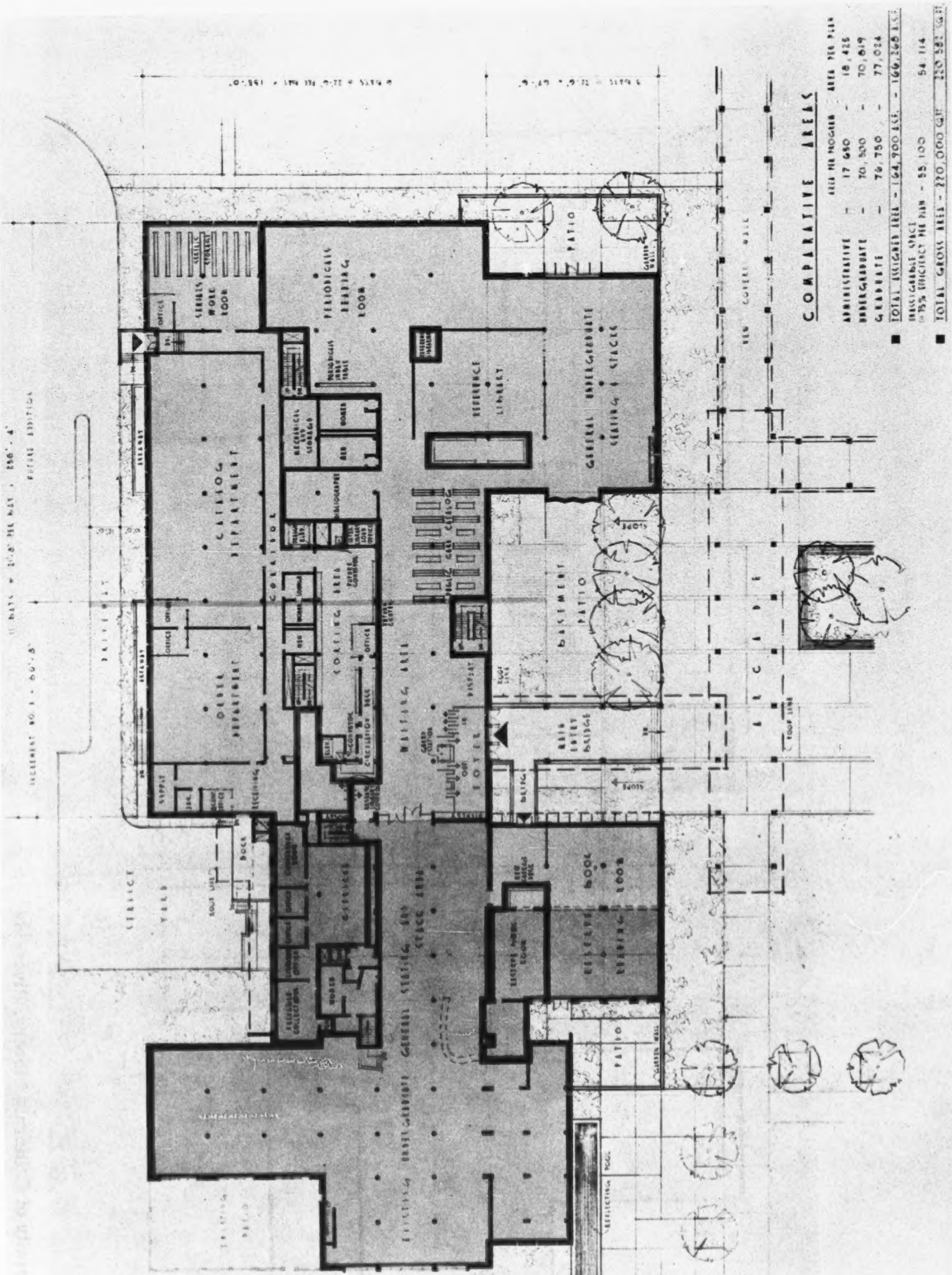
The new building is five stories high, with only four above the ground. The first floor is at the basement level. We excavated a lower-level terrace and will create a second ground floor. By putting the entrance to the library at the central level, which is the first floor, we have eliminated walking up two floors for library services.

The first increment of about 52,000 square feet is nearing completion. The University is now requesting additional funds for alteration of the original structure to make it conform with the master plan.

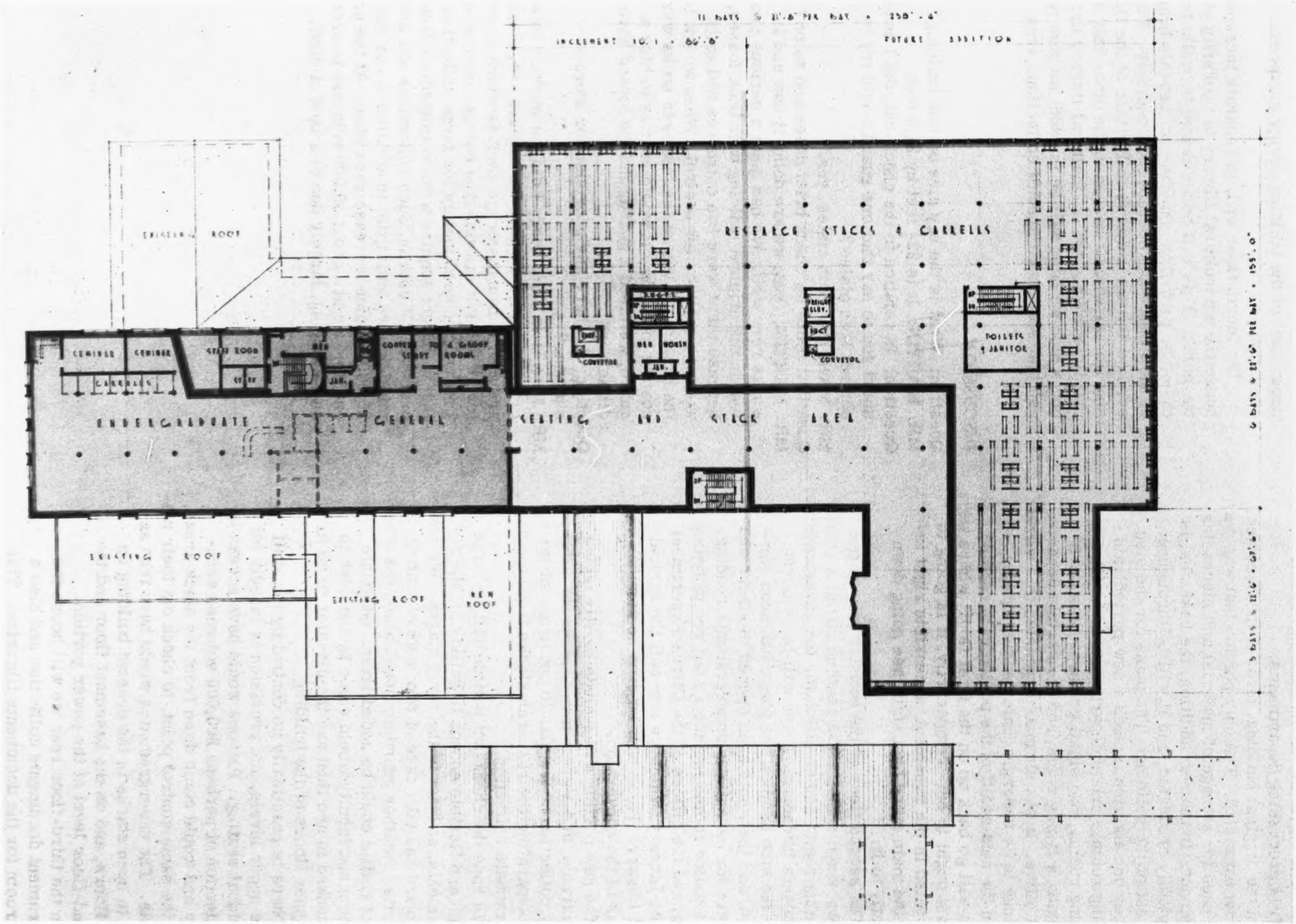
MR. MARTIN: On the first floor we will have a large undergraduate reading room consisting of practically all of the original building, the reserve books room operation, the new entry foyer, lobby area, circulation desk, card catalog, reference department, periodicals, and more reading


MECHANICAL EQUIPMENT
GENERAL UNDERGRADUATE READING AND STACK AREA
TOILETS & JAN.
TYPING ROOM
MICRO FILM ROOM
OFFICE
GROUP STUDY ROOMS
BASEMENT PATIO
AREAWAY
EXISTING MECHANICAL ROOM
EXISTING UTILITY TUNNEL
EXISTING LIBRARY BUILDING FOUNDATION
UNEXCAVATED

University of California Library, Riverside
Ultimate basement


SERIALS WORK ROOM
PERIODICALS READING ROOM
CATALOG DEPARTMENT
ORDER DEPARTMENT
COATING AREA
REFERENCE LIBRARY
GENERAL UNDERGRADUATE SEATING & STACKS
WAITING AREA
FOYER
BASEMENT PATIO
MAIN ENTRY BRIDGE
ARCADE
PATIO
RESERVE BOOK READING ROOM
GENERAL UNDERGRADUATE GENERAL SEATING AND STACK AREA
SERVICE YARD
DOCK
REFLECTING POOL
COMPARATIVE AREAS

University of California Library, Riverside
Ultimate first floor


11 BAYS @ 22'-6" PER BAY = 250'-4"
INCREMENT NO. 1 = 86'-8"
FUTURE ADDITION
6 BAYS @ 22'-6" PER BAY = 135'-0"
3 BAYS @ 22'-6" = 67'-6"
EXISTING ROOF
RESEARCH STACKS & CARRELLS
TOILETS & JANITOR
FREIGHT ELEV.
CONVEYOR
MEN WOMEN
JAN.
SEMINAR
SEMINAR
CARRELS
STAFF ROOM
STAFF
MEN
JAN.
CONFER. STUDY
TO 4 GROUP ROOMS
UNDERGRADUATE GENERAL
SEATING AND STACK AREA
EXISTING ROOF
EXISTING ROOF
NEW ROOF

University of California Library, Riverside
Ultimate second floor

space. The whole top of the building, at this point, is processing departments.

In the original building, most of the basement was not excavated. The only portion that was we have used for storage of material and mechanical equipment. In the new addition, the basement is completely excavated, and it will be throughout the rest of the building. The plans for the step number one addition include a new periodicals reading room, serials department, microfilm reading rooms, two small group studies for 6 students, a typing room, and the serials department office. In the ultimate expansion this would continue to be undergraduate reading space.

In the next addition the periodicals reading room will go back up on the first floor, where we think it ought to be. Temporarily, it is going to be located in the basement, accessible right inside the main entry by a staircase going down directly to it.

The second floor of the building has, at the present time, a microfilm reading room, a small listening room, and an office for the government documents librarian. These will be removed after the step number one phase has been completed, and the whole area opened to stacks and readers for essentially undergraduate reading. The smaller rooms include a staff room, typing room, and the offices of the Citrus Experiment Station Library, which we now call the agricultural library. These will be used as seminar rooms in the conversion.

The new portion will include mostly tables, a few carrels, and a great many stacks for large, bulky collections. We plan to put in a nonbearing wall separating the research stacks from the undergraduate collection.

We hope the check-out station will be large enough and flexible enough to satisfy all the requirements, at least in the early stages. We feel one guard can take care of two lines of exiting students. Another guard stationed along the other line of traffic could be added later. Graduate students and faculty would come by the desk to be checked in and then use the elevator to go to the upper floors of the building.

There is practically no control by the staff in the upper levels, and provision is largely for individual seating. Patrons would have access to a collection of perhaps 800,000 volumes eventually and would come down from the stack areas, past the same control point, to check out their materials. The undergraduates would have free access to open stacks in the present building on both floors, and on the basement floor and the second-floor level of the newer portion.

In the third-floor rear we will house the government documents collection and also a workroom for the documents librarian. This area will include the only staff members in the upper part of the building during our present operation.

The fourth floor will, in separate increments, house the agricultural library temporarily on the north. This will be separated by walls from the other part of the building so that this branch of the library can operate independently. The science and agricultural collections of the University library will be housed in the other half of that floor. When the agricultural library moves out, which we hope will be in 1966, we plan to use that space as a special collections area.

DISCUSSION

Question: What is the bay size on this building?

MR. MARTIN: It is 22½ feet by 21.8 feet.

Question: In relation to the check-out, did I understand you to say that one guard would try to control both aisles?

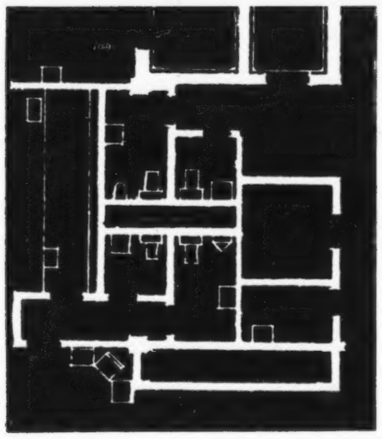
MR. MARTIN: Both aisles, yes.

Question: Does he check brief cases and so on?

MR. MARTIN: Yes, we are doing it now and it works very well. We had quite a serious problem in the original building with book losses, because there were two entrances and exits with no provision for control. When we got to the basic point where the losses in books were costing more than it would cost us to hire a guard, we hired a guard, and the losses have diminished.

Question: Is there any provision for storage shelving?

MR. MARTIN: I am sorry I did not mention this. In the basement, where the serials are, there are also unbound storage shelves which provide for 16 units of drawer-type compartment storage. This will be used mainly for large collections that we might acquire with no immediate time to process. Of course, such collections are something that we anticipate in addition to our normal 25,000-volume increase each year. At the present time we are about 30,000 volumes in arrears on cataloging, largely due to a lack of staff.



Public Libraries

THE PROGRAM

Programming before Planning

HURST JOHN, A.S.R.A.
Columbia, Missouri

Panel Discussants: **Harold Roth, Director, East Orange Public Libraries, East Orange, New Jersey**

Clarence S. Paine, Chief Librarian, Lansing School District, Lansing, Michigan

Frances Flanders, Ouachita Parish Public Library, Monroe, Louisiana

HURST JOHN

For the want of a nail the shoe was lost,
For the want of a shoe the horse was lost,
For the want of a horse the rider was lost,
For the want of a rider the battle was lost—

And so on. You know the story. For want of a decision, for want of an idea, for lack of preparation, a service can be lost: library service, architectural service, any service. It starts with a decision. It starts with an idea. Where do you go to coordinate all of these ideas, all of these services that you have rendered, and project them into what can be five, ten, twenty years from now?

The beginning of the building project started when the library in the community was first put into service. All the needs of the library which have accumulated should be represented in your programming. To put these needs into words, you turn to your program team. This program team can be a consultant, an architect, the librarian, and a board.

The scope of your program needs to extend beyond what you have been accustomed to doing, because what you have been doing is serving the needs with the facilities that you have. Programming is an accumulation of decisions, and on paper it becomes a reflection of what you know that you would like to pursue. Planning is putting these decisions to work, in the way of bricks and mortar, plans, specifications, and instructions. Its philosophy is the objective look.

Responsibility for planning

Responsibility is that which is assigned by the board to the librarian; by the librarian to the architect to pursue the needs of the job; and by the architect to the consultant to serve the needs of the librarian to complete the job. And whatever is being done is not sufficient until there is understanding among those who are working at it.

The unfortunate thing we have is the word "compromise." We call it compromise whenever we do not complete a job. It is not a compromise necessarily when you change your mind, if you have a valid reason for doing so. It is a compromise when you refuse to think the problem out, test it out, and work it out.

Virginia Young wrote a pamphlet entitled, *The Trustee of a Small Public Library*, and in it she makes a very valid statement: "He assumes the responsibility of his position."[1] The same as everyone else should do. In our own project in Columbia, I would like to translate for you the steps we took and the way we approached the problem.

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[1] Virginia G. Young, *The Trustee of a Small Public Library;* No. 3 in a series of pamphlets of the Small Libraries Project (Chicago: American Library Association, Library Administration Division, 1963), p.1.

The decision of the librarian to employ the architectural firm prior to the programming, site location, and the employing of consultants, was questioned by other architects. There was doubt about the desirability of this move. I do not agree. Many architectural firms do not receive a chance to program. Either they draft the work which has gone before, or they have to remodel the work after the librarian's mind is fixed and the plans are set. So an architect is not required, but a draftsman.

Architect as coordinator

An architect is a coordinator. He is a master at blending paper ideals with materials and site. The whole scope is his field if he is doing a job. He cannot be isolated and put on the job after the site is found, after the program is written, after the general details of the project are worked out. Perhaps you should educate your architect along with the rest of the team, and let him educate you. Find a responsible architect who is willing to learn, and teach him a little librarianship so that he knows more than the mechanics of what you are trying to do.

The architect signed a contract with us for services, and in this contract we were to employ the consultants. We chose the consultants together, though final decisions belong to the librarian. Then this team dealt with the librarian's program, the consultant's recommendations on that program, the architect's reaction to that program, and an informal study which had been done independently, dealing with the flow of services within the library.

Phase one of several steps toward the building is the program. It is an analysis which recommends size and site but contains no plans. Once the analysis is reported, the site is contemplated and we enter stage two: site study and development.

Site planning is a step that too often even the architect wants to get past, because it takes time to coordinate and to study what is likely to happen ten or fifteen years from now in traffic flow and other factors of this nature, which must be worked out with your city planning commission. We are at this point in our own project.

Last January I suggested to the architectural committee that the enthusiasm and interest and obvious pleasure of those participating in building institutes made me realize that here was a forum, a central discussion, where objective thinking could be put to work in programming, or even before programming. I have asked three librarians to respond with their experiences.

HAROLD ROTH

The definition of programming as given by Mr. John does not quite agree with some of the definitions I have seen, which say that programming is essentially all the steps involved in planning. For example, the type of programming I am doing at the present time is not being done on paper. Our programming is being done in terms of an entire set of existing local conditions, which have to be involved in the whole matter of whether or not we will get a new library, an enlarged library, or be detained just exactly where we are.

Incidentally, I want to emphasize the importance of the local conditions in anything that you do in the way of programming and/or planning. I am not so worried about the difference between building a college library and building a school library, as I am with the areas in which these buildings are to be built. This is because the problems that exist in a highly urbanized community in the East are not the same problems that exist in the well-laid-out, modern community in the West and Middle West.

Just discussing the fact that we need a building is programming. Programming is time to instill the concept. This is the stage we are at in programming. We are promoting this, pushing this, talking about it in as gentle a way as we can.

CLARENCE S. PAINE

Mr. John mentioned the team in this programming: librarian, architect, board. I am going to introduce a new member of this team. When I went to Lansing, I inherited a citizens committee whose members were planners. This was a committee of 90-100 interested citizens who had been working for five or seven years, and they were divided on two things. They were divided on the site and they were divided on how to finance it. Should it be pay-as-you-go, or a bond issue?

We finally arrived at a program and a charge to that community and its special committee. First, the committee was divided into a number of special committees: a special committee on library service to children, a special committee on library service to business and industry, and a special committee on library service to the handicapped, including eight or nine subcommittees.

This was the charge: Each of the special committees, as a result of its studies and with the assistance of the staff consultant, was asked to file a report with the executive committee of the Citizens Committee on Libraries answering the questions:

1. "Why and to what extent is this facet of library service, which was assigned to the committee for study, needed in Lansing?"
2. "What materials, equipment, and specially trained personnel would be required to implement those services?"

Upon receipt and approval of the several special committee reports, the executive committee transmitted these to the librarian who, with the assistance of the library staff and the architect, interpreted the reports in terms of physical plant space, orientation, and equipment required to carry out the program of services recommended. In other words, they answered the questions, "How can these library services be most economically and effectively provided?" and "How much will it cost?"

The result? A superb document filled with excellent, highly imaginative ideas, 90 percent of which were acceptable. Here the citizens were telling their fellow citizens what was needed. Moreover, it greatly broadened the base for a bond issue which was to follow, and alleviated any great controversy over site.

FRANCES FLANDERS

Just seven years ago, the people of Ouachita Parish approved a bond issue for the construction of library buildings for the Ouachita Parish Public Library System. The board of control of the library asked for $700,000 to be used for the construction of three buildings.

Before the bond issue was scheduled, time was spent reading, studying, and working out the estimates of the size and cost of the buildings needed. The bond issue was approved in August of 1956. Work began immediately on programs for the three buildings, so that they would be ready when the architects were appointed.

The programs opened with an introduction which explained the purposes of the building, the type of site needed, and the general standards for lighting, air conditioning, acoustics, and the like. They stressed the necessity of planning the interior of the building before the exterior. Next came a detailed description of the space needed for each activity and the purpose of each space. Last of all was included a summary of the floor space needed.

The architects studied the programs carefully, visited a number of libraries, helped in the selection of sites, and drew up the plans. The buildings have been used long enough to prove that they were good plans. The buildings serve the purpose intended, and the people of the parish are very proud of them.

DISCUSSION

Question: How much do future trends and future needs play in your part of the program?

MR. ROTH: We are trying to stress the fact that regionalization is the coming thing, although it has never existed in Essex County.

MR. JOHN: The librarians and their trustees should help their architects and their consultants think in terms of something more than what is now being done. Look at the structure that is still useful seventy-five or a hundred years from the time it was built, and realize that the planners went way out in left field to get that structure built.

Federal Aid Programs for Public Library Planning and Construction

H. A. FAGERSTROM
Public Facilities Operations Officer
Housing and Home Finance Agency
Chicago, Illinois

In the thirties many events occurred which changed the relationship between local and municipal entities, and state and federal governments. For example, the federal government embarked on a nationwide construction program aimed primarily at alleviating unemployment. During that period one of the big difficulties was the time required to do the project planning. Although there was money, authority, and legislation, the hours required to plan the projects, finance the projects, and arrange the legal details consumed so much time that it took at least eighteen months to start the project.

This experience generated thought as to the value of advanced planning. At the close of World War II, there was a fear that there would again be widespread unemployment, resulting from the demobilization of the war activities. The Advance Planning Plan came into being as a part of the Demobilization and Recovery Act of 1944.

The ground rules for review and approval of requests for advances have not changed materially. In essence, any municipal entity is eligible to apply for a planning advance provided it demonstrates (1) a need for public works; (2) the legal authority to plan, finance, construct, maintain, and operate the public work proposed; and (3) financial capacity to finance the cost of constructing the public work.

A planning advance might be referred to as an interest-free loan in the amount of funds necessary to advance the planning to the point where the project can be fully planned, or to the point at which construction bids can be solicited. This interest-free loan is repayable when the construction program begins.

On the national level, more than 5,000 applications have been received, of which about 3,500 were approved. That figure may be misleading, because some of those which we disapproved were subsequently refiled in more accurate or more complete form.

Of the projects planned, some 900 actually were placed under construction and the advances repaid to the federal government. In effect, then, the money appropriated for Advanced Planning becomes a revolving fund, which can be used again and again to plan other projects as those initially planned are placed under construction. In terms of dollars and cents, this involved over $41,000,000; $19,000,000 of the $41,000,000 has been repaid to the federal government.

Our experience in all fields has indicated that the best investment that can be made with respect to planning is adequate findings from studies carried out over a period of sufficient time. If this is done in orderly fashion, voter approval for bond issues is generally secured with less struggle.

The projects cover the whole gamut of public works facilities: sewer facilities, water facilities, municipal buildings, street improvements, drainage facilities. Yet, very few of the projects have been for library facilities. Priority of need of public projects is a problem. Libraries, unfortunately, too often fall low on the local list of public improvements desired or necessary, and this is why libraries have not come within the area of the Advance Planning program to the same extent that other types of public buildings have.

Loan program

There is another type of assistance available. Eight years ago Congress appropriated money for assisting municipal entities in the construction of necessary public works and facilities. Again, the type of facilities constructed under this Public Facilities Loan Program was limited to sewer works, water works, and municipal buildings of various kinds; no libraries were constructed.

The Public Facilities Loan Program was geared particularly to the smaller communities and was intended to make financing available in those instances where it was not otherwise available by reasonable interest rates. The Public Facilities Loan Program guarantees to the applicant a bid for the bond at par, with an interest rate not to exceed the prevailing rate approved for the year.

For a community with a good financial reputation, this is no bargain. General operation bonds can be sold by most communities at an interest rate more desirable than this. But, in isolated communities, this rate allows the civic officials to sell their bonds without rediscount and makes financing of the project possible. The Public Facilities Loan Program is a program, then, that makes available loan money for construction purposes. For the most part, this program will not particularly apply to library facilities. There may, however, be exceptions.

Public works program

Another program was developed last fall, known as the Accelerated Public Works Program. This was a crash program, developed primarily to assist economically distressed areas, with respect to alleviating the immediate employment problem. It is not truly a public works construction program, because the emphasis is on creating employment at the local level rather than on the construction of public works. Under that program we have received eight applications for construction of library facilities in the Midwest.

A prerequisite to the construction of any project under the Accelerated Public Works Program was that the project should be able to be placed under construction within 120 days after receipt of funds. This meant that only those projects for which plans had been completed or were far enough along to be completed quickly were eligible for consideration.

The Accelerated Public Works Program did provide one thing that neither of the other programs did. It actually made available a grant of 50 percent of the cost of the project, so that if the community were able to finance 50 percent of the cost without too much delay, it was in a position to get its library constructed at about fifty cents on the dollar.

To sum up, there are three programs for financial assistance available from the federal government at this time for construction of library facilities. One is the Advance Planning Plan which advances funds for planning purposes. The second is a loan program. Projects are approved under this program only if the loans appear to be sound and if they can be repaid without undue hardship to the community. The last is the Accelerated Public Works Program which provides grant funds. Requests for the grant funds far exceed the appropriations available. There are more than 1,400 applications in the office requesting grant funds.

DISCUSSION

Comment: The area redevelopment program, the program with which Mr. Fagerstrom just concluded his remarks, has had forty-two requests from public libraries throughout the country for grants in the last year. Of these, about 50 percent have been accepted. About $2,100,000 has been involved in these matching grants. The Advance Planning Plan, the first program to which Mr. Fagerstrom referred, has had about $300,000 in funding for library projects, and there were about thirty library projects involved in these planning funds.

Another federal program which has some relevance to people interested in building is the Surplus Property Disposal of the federal government. This program has been in operation since the late 1940's, and about twenty-six parcels of land and property have been ceded to local library authorities for a total value of $600,000. There is a Federal Post Office Renovation Program in operation now, which means that there will be a good many federal post office properties declared surplus across the United States.

MR. FAGERSTROM: The Midwest ten-state area represents about 25 percent of the population of the United States and, therefore, the figures quoted for this area were just about one fourth of what they are from a nationwide viewpoint. The $50,000,000 and 5,000 applications were national figures and covered all types of projects.

Comment: With Advance Planning it seems as if a drowning man receives assistance as he approaches the shore. You lend the money on assurance that the money is available for the building. If one had the money to complete the building, he wouldn't need it from the Advance Planning Plan.

MR. FAGERSTROM: There would be little point in advancing money for planning a project of any type just for the sake of developing several rolls of blueprints and specifications. The demonstration that is required is capacity to finance the cost of the project.

In order to obtain authority to issue the bonds, you must convince the electorate that you need to spend the money. This is where the Advance Planning money may help your project. The public do not wish to move until they know what they are going to get for their money. They would like to see some floor plans and some cost estimates.

Question: Will you advance money on a project if it has the bonding capacity?

MR. FAGERSTROM: Yes. We have not asked if you have authorized the bond, but if you have the authority to authorize it.

Question: What happens if you borrow $100,000 from the federal government and the project falls by the wayside?

MR. FAGERSTROM: If we advanced you $100,000 and you completed the planning, you have already paid that to the architect. The advance does not become a firm debt until the project plan has been placed under construction. It is a continuing and contingent obligation.

Question: Do you know any reason why the Public Facilities Loan Program could not be used for libraries?

MR. FAGERSTROM: There is no reason why it cannot be used, except from a practical viewpoint. Normally the type of security applicable to a library building would be a general obligations bond. In most instances, general obligations bonds can be sold to private investors at an interest rate equal to or better than the interest rate that we charge for loans under that program.

Since the Accelerated Public Works Program precludes the construction of any educational facilities, the question has been raised about construction of a library that serves a municipal purpose as well as a school facility. If the library facility is intended primarily as part of the school system, as an educational facility, then it would not be eligible. But we recognize that a situation might develop where a library would be held jointly between a municipality and a school and serve both.

Question: Does this Advance Planning cover such items as consultants' fees?

MR. FAGERSTROM: Yes, with one reservation. Advance Planning funds are not intended to pay for cost of planning accomplished prior to the time we enter into agreement with you. They are not to be used for feasibility studies, or for surveys intended to determine whether or not you should build a project.

Question: What determines the top limit of your grant? Is it a percentage of estimated construction?

MR. FAGERSTROM: This would be the general formula. There is no top dollar amount, because the cost of planning normally relates directly to the estimated cost of construction. For preliminary planning, which would carry a project up through its schematic design phase, this could vary from ½ percent up to 1½ percent of the construction costs. The normal fee for planning up to the point where you can advertise for construction bids would probably be between 4 and 4½ percent of the estimated construction cost for the project.

Question: Is there a time limit within the fiscal year for submission of plans, or is there an ongoing year-to-year program?

MR. FAGERSTROM: This is an ongoing year-to-year program. Each agreement we enter into, however, does stipulate that the applicant will submit completed plans in X number of calendar days in order to eliminate procrastination.

Question: In what period of time would the community be obligated to repay the federal loan?

MR. FAGERSTROM: If you are requesting money for preliminary plans, we will think in terms of five years if necessary. If you are asking for an advance to cover complete planning, then we would like to have reasonable assurance that you are thinking in terms of constructing the project within the three-year period. The obligation to return the money is dependent upon when you place the project under construction.

Question: Will this plan apply to additions to libraries as well as to new construction?

MR. FAGERSTROM: Yes, additions are equally eligible.

Question: Is there a secondhand post office list available?

MR. FAGERSTROM: Generally, this information is available through an office in each state capitol that works closely with the Office of Education. The list is not limited to buildings. It includes filing cabinets, typewriters, and desks.

Role of the Architect, Engineer, and Librarian in Library Planning— A Panel Discussion

Moderator: Frederick Wezeman, Associate Professor, Library School, University of Minnesota, Minneapolis, Minnesota

Panel Discussants: Lester Stoffel, Librarian, Oak Park Public Library, Oak Park, Illinois

A. Chapman Parsons, Librarian, Alliance Public Library, Alliance, Ohio

James Hammond, A.I.A., Hammond & Roesch, Chicago, Illinois

William Fyfe, A.I.A., Perkins & Will, Chicago, Illinois

LESTER STOFFEL

The role of the librarian in the building process is a very complex one, and in general terms we should say he is the owner. However, he has to remember that he represents the library board, as well as the taxpayer himself. He must be responsible for providing leadership in any building program. Yet, he also has to exercise a considerable coordinating function with the architects' board.

The librarian, before he starts to construct the building, must first know what he wants. You can start by discussing what the building should contain—and what kind of services you should provide—with people in the community, with the board, with the staff. You can read the professional literature that is available, and you can visit library buildings all over the country, which is a very excellent way to find out how and how not to build libraries. You should determine the desirable potential service you can offer to the community. All of these factors are essential in writing the program, which is a statement of your philosophy and the principles, requirements, and limitations that will be used as a basis for collaboration between the architect and the librarian in the development of plans.

Information contained in this statement of program should include site selection; location of the building; capacity for books, readers, and meetings; capacities, locations, and relationships of working rooms; the equipment to go in them; the people to work in them; the problem of whether the building should be air conditioned or not; and the potential budget with which you will be able to operate. The program also should include the relationships of the various areas, with efficient arrangement for minimum supervision. In addition, every librarian who is thinking of building should study the local zoning ordinances.

Relationship with architect

Another important function of the librarian in the building process is assuming leadership in association with the architect. The responsibility is really that of the board, although the librarian should exercise considerable influence. For example, one of the basic decisions that has to be made is whether you want a large or a small firm.

Any librarian who is considering a new building should read the *Architect's Handbook of Professional Practice.*[1] When you go to see the architects, see what they have done. Talk to the owners for whom they have built buildings. Ask the architects what is to be included in the fee they are quoting. For instance, question whether they provide full-time supervision on the job, or if the engineering firm is actually part of the architectural firm that you are going to use.

You should be sure that the architect you interview is the exact one with whom you will be working, because you are hiring the architectural firm on the basis of that interview. Personalities do enter into your decision and, if you end up with somebody else working from the firm, you may not be very happy with him.

There are three controlling factors in building: cost, size, and design. The architect should have freedom in at least one of these areas. In public libraries the architect cannot be given freedom in cost. Since size is determined by cost, he cannot be given free rein here, either. Therefore, if he wants freedom with design, he should have it. Yet freedom here, as it is everywhere, is limited, and the library must curb the architect's freedom to a degree. For example, architects like beautiful interior walls. Librarians have books to put on them.

A. CHAPMAN PARSONS

Though we have not yet discussed the preliminary plans and final working drawings, I will begin with the role of the librarian in construction. It is important that you make sure that the architect is going to provide supervision. If not, then you should write into his contract that he provide a clerk of the works for you so that somebody represents the owner on the job at all times.

We asked our architect, during construction, for a monthly progress report from the various contractors. These reports were submitted monthly with the certificates of payment as they came to the board, and were then checked against the previously submitted construction schedule—arranged by dates—

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[1] American Institute of Architects, *Architect's Handbook of Professional Practice;* formerly, *Handbook of Architectural Practice* (Washington, D.C.: The Institute, 1963).

and the probable payment to be made that particular month. This enabled us to invest our money, and reinvest our money, for shorter periods of time. It also helped the other members of the planning team, because they knew the dates toward which they were working and what stage of construction the building was in at all times.

During the construction of a building, the architect issues change orders for alteration to be made in the building. The librarian should review these change orders very carefully, because they may increase or decrease the cost of the building. In many cases there may be sizable amounts involved in the change orders.

It is important that the general contractor provide you with a list of his subcontractors within ten days after the contracts are signed. It is the architect's responsibility to check on the qualifications of the subcontractors for the owner.

Furniture layout

The librarian is responsible for the furniture layout. He may share this responsibility by engaging an interior architect or a library manufacturer design group, or he may decide that he and the staff would like to attempt this layout. Regardless of who does the planning, layout should be planned in the earliest stages of the building, with the cooperation of the architect. If a library consultant has been hired, he may supervise the layout.

Furniture layout is made by drawing furniture right on the plan as soon as you can get a floor plan from the architect's drafting desk. In addition to this type of layout, we used a planning board with magnetized furniture.

For our building we retained a library consultant who helped with the building and with the supervision of the layout. As you are doing the layout, you should also be compiling an equipment list along with the basic cost data for each item of equipment. Equipment costs are from $2 to $3 a square foot, or from 12 to 20 percent of your over-all building cost.

At the same time you may want to compile a list of the old equipment that you intend to use in the new building. You should make notes as to whether it is to be refinished or repainted and any repair work that it needs. Also, the probable cost for these alterations should be listed.

After the entire layout is completed and the furniture is numbered directly on your floor layout, you begin with specifications. The number on your layout is used for each item in your specifications as it is issued.

Selection of furniture is quite often a compromise; but you want to be positive that compromise does not impair the function of the intended library service. It is a good idea to collect sketches and photos of particular items of furniture that might be needed. These can be placed in notebooks and indexed by item and by manufacturer. Later one can compare items of furniture and specifications from the different manufacturers.

Specifications

Specification writing is a critical time in the planning of a building, and this is a job for the expert. If you retain an interior architect or consultant, you may request that he write the equipment specifications. *Guidelines for Library Planners*[2] gives some basic considerations for the writing of specifications.

The first point is to know what you want and why you want it. Determine what is needed to do the job satisfactorily under the circumstances in which it will function. For instance, in general you know you want a charging-in desk. In detail, which units do you want, and then in final detail, what dimensions and what specific line? Secondly, you should know what is available. And, finally, you must reconcile your needs and your wants with the available equipment.

In translating your needs into written specifications, there are three general classifications you may use. The first is the open specification, which is just a description of the item that you need, without reference to any brand. The second type is the brand-name specification, wherein you actually describe the item you want, the dimensions, and the specific company and catalog number for that item.

The third classification is the modified brand-name specification, which is accompanied by the description of the item and the special feature, perhaps a modification of the standard item. Be sure that you get quotations on the modification to see if you can afford it.

You should write good, clear specifications to be bid. In many cases the brand-name specification is the best type for the nonexpert, because it establishes quality in the specification.

JAMES HAMMOND

The architect must know and understand the broad objectives the library has, the type of service it is going to give to its particular community, whether it will expand on this site or whether there will be branch libraries, the details of technical func-

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2. Sol Levin (Rampo School District No. 2, Spring Valley, New York), "Writing Specifications for Library Equipment," *Guidelines for Library Planners* (Chicago: American Library Association, 1960), p.119-21.

tions within the library—everything about this particular library. In other words, the architect must become practically a member of the library staff in his spirit of understanding. The librarian, while he must respect the architect's role, should participate in the development of the planning to the extent that, by the time the job is over, he almost thinks he himself was the architect.

I shall talk briefly about the architect's role during programming and design. For the best interest of the library the architect should be involved very early in the game. He should help in establishing the budget, especially if there is a bond issue. Also, the architect can be very helpful in other ways. As an example, he can assist in defining the architectural engineering requirements for site.

A very important point of this relationship is that there should be one person within the library who is a central point of responsibility and policy decision. He works, of course, with his board, but he should be the one central point to whom the architect can turn for real decisions.

Another vital requirement is the development of a systematic program. People think the architect begins his job with sculpturing and elevation, but actually he should be involved for many weeks in programming with the librarian. This participation can be very helpful in the architect's understanding and quick development of a design.

Space relationships, details of equipment, the relationships of certain areas to the public, needs for air conditioning, and special book areas, are some of the things to be considered. In this way, the architect and the librarian are working intimately together, and it is a tightly knit joint effort.

During the preliminary design period, however, the architect should be left alone for a little while. It takes time to bring together the many facets that are going to make this building plan. To exploit the site effectively, and to organize the program requirements efficiently, take time and ability. The test we have for the successful development of the concept of the building of a library with which we are involved is when we get down to a very simple solution with few basic elements; then we know we are on the track. Another aspect that is important is that neither the architect nor the librarian should have any preconceptions as to building form.

The architect must be conscientious about costs and should be sharing a barometer of cost all the way through the project. He cannot be on the team of construction, but he does have a very definite responsibility. The librarian, on the other hand, must give the architect total control of all the visual aspects of the environment he has created. The architect should be intimately involved in the furnishing plan: the selection of the furniture and the choice of colors. He should have a part in the landscaping.

WILLIAM FYFE

Jim Hammond has directed our attention to the necessity for careful programming, and has indicated how this kind of planning gets transmuted into a living building. Yet the beautiful plans that are on paper and in our minds still have to be built, and this takes more special know-how, technical knowledge, experience, and ability.

To illustrate this dual character of the architect, I recall an incident at a meeting in Montreal a few years ago. A questioner wanted to know if a client should meet with the architect in his office or at the owner's place. It developed that what this questioner had in mind was that by visiting the architect's office, it would be possible to determine if there were paintings on the walls as well as college degrees, if there were flowers in view as well as state licenses. The architect's diploma and license on the wall, like your doctor's, are evidence of a training and a certain competence—in the case of the architect, to design and organize building procedures. But, at the same time, "flowers" in your building are important.

From time to time architects have tried to verbalize their position and services. With your permission I am going to refer to *Facts about Your Architect and His Work,* as published by the American Institute of Architects.[3] Architectural services are usually rendered in three consecutive stages. The first stage is preliminary services, and this has been discussed. The second stage is working drawings and specifications. These are precise legal documents binding the librarian as well as the contractor.

These, briefly, are the services generally rendered in this phase of the work: The architect develops the preliminary drawings into working drawings. Included are all the technical information requisite for accurate bidding and final construction, as well as drawings essential for architectural, structural, plumbing, heating, electrical, ventilating, and site improvement work.

He prepares general specifications which state the conditions under which construction will be carried out, including insurance requirements, bonds, method of payment, and related nontechnical matters. He prepares technical specifications describing the type and quality of materials, their finish, and the manner and places in which they are used. He assists in obtaining approval of controlling governmental agencies, where necessary.

Engineering role of architect

Our topic was "Role of the Architect, Engineer, and Librarian in Library Planning." So far, the engineer seems to have been slighted. Unquestionably the role of the engineer is important, even vital, to the building. It is just as vital to the final end product of a good building that these services are integrated as a very real part of the building design.

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[3] American Institute of Architects, *Facts about Your Architect and His Work* (Washington, D.C.: The Institute, 1959).

This process of integration is a two-way street: the principles of the various engineering skills and the engineer's detailed knowledge of the skills. At the same time the architect has a grasp and a concern for all the engineering skills, and they become a very real part of the design. As architects, we have begun to learn to make our building a stress structure. But we have a long way to go to assimilate all these many other engineering skills, such as air conditioning, and get the design to grow out of these components of the building.

On completion of the working drawings and specifications, the second stage of services is completed and the third stage, business administration, begins. Services during construction include assisting with proposals and contracts. In the supervision of construction the architect generally renders the following services:

Advises on the qualifications of prospective bidders
Assists in preparing proposal and construction contract forms, advertising for bids, receiving and opening bids, and awarding contracts
Checks shop drawings and samples submitted by the contractor
Makes periodic inspection of the construction while the work is being done

As an architect, I must take exception to the statement made earlier that you must get your architect in this contract to agree to have a clerk of the work. This is not normal procedure. You are asking him to spend money he should be spending on other services he can render you better.

DISCUSSION

Question: Is it customary to pay the architect as much for a new building as for a remodeling?

MR. HAMMOND: The architect's fees should vary according to the complexity of the building and the size. For a very large building they might be in the 10 percent rate.

MR. WEZEMAN: On the basic fee, 6-10 percent—what does the architect provide for that?

MR. HAMMOND: The architect provides programming service with the librarian in the early phase, design, and working drawings. The extent of the construction supervision varies with the size of the building and the complexity. It would not, probably, involve furniture selection and landscaping.

Question: If you read the standard contract today, it just says a professional person working with another professional person. What we are trying to find out is what is the architect responsible for?

MR. FYFE: The first thing I think we ought to get clear is that the architect is working for and with you as a professional. He does not make a product and sell it. This is a very definite distinction between his service to you and that of the general contractor.

The contractor, through the working drawings and the specifications, contracts legally to produce a building in accordance with those documents. You contract with the contractor to pay so much money for doing so. The architect is no more eager to have the roof leak than you are; but these are things he does not guarantee, because he is not the builder. If he is competent, his drawings and specifications will coordinate all the things you need in the building in the proper way, and will guarantee that they are just what you need.

MR. WEZEMAN: What are the ranges of architects' fees on new work throughout the United States?

MR. FYFE: They vary from state to state and from type of work to type of work. A factory has a very low percentage of cost. A library gets into a higher percentage. A very complex building will be still higher.

The percentage of final cost of the work, executed, plus certain stated expenses the architect incurs, like travel, is one type of payment. This is the one with the range of 6-10 percent.

Another method is a fee or percentage of his services, plus all of his expenses. In other words, you pay the architect for his actual expense, and then a percentage of his fee for his profit and overhead. It is difficult to give a definitive answer to a nondefinitive problem.

MR. STOFFEL: I think one of the architects might clarify the role of the architect once the contract has been assigned to the contractor.

MR. HAMMOND: The architect must be the agent for the owner all the way and control everything to the client's best interests. He must also protect the contractor during the construction phase. Is that what you mean?

MR. STOFFEL: You represent the contractor and the client?

MR. HAMMOND: Yes. But our client is the owner, and we are primarily interested in the owner.

MR. FYFE: After construction begins, somebody has to decide if the contractor has actually met the specifications and working drawings. Generally, this devolves on the architect. In fact, he is judging his own work, and it puts him in a quasi-judicial position which has been recognized in the courts. There is recourse through arbitration, usually, or in the civil courts. The architect has to decide whether the contractor actually did function in accordance with the contract documents.

Question: This relationship between the architect and the librarian is far less important than the relationship between the librarian and the decorator, because the decorator deals with colors, drapery, and upholstery that many people sit on or look at every day. It is important to have an interior decorator on the scene.

Sometimes a community wants to hire an architect to build a library, and then goes to a library school to hire a librarian who is graduating in June, saying, "Let's start now, and we will have a nice graduate and a library."

Now, does the architect say, "Wait a minute until you get a librarian?" Or does he go right ahead and start constructing the building?

MR. FYFE: Some years ago we were put in precisely that situation. The librarian was not a professional librarian, and as architects we had been retained to do the job for the building. We convened a panel of librarians, city planners, and architects. We sat around the table and discussed in some detail what a small community should have. If you do not want to do that, then I suggest a library consultant can do what the librarian would do.

Comment: In a similar situation a librarian could not be hired at the moment, so the state librarian acted in that capacity. Thus, we had a professional acting for the librarian interest.

THE LIBRARIES

Manitowoc Public Library

Manitowoc, Wisconsin

STATISTICAL DATA

Architect: Perc Brandt
Type of library: Public library—main building
Population to be served: 32,275; projected to 45,000
Area: 28,638 square feet
Book capacity: 113,200 volumes
Seating capacity: 164
Cost: $419,900
  Equipment: $69,000
  Building: $315,000
  Site: $35,900 (landscaping, architect's fees, etc.)
Cost per square foot: $11

PRESENTATION OF PLANS

Librarian: Mrs. Barbara Kelly
Critic: Roger Francis, Librarian, South Bend Public Library, South Bend, Indiana

MRS. BARBARA KELLY

Manitowoc is located in eastern Wisconsin on Lake Michigan, eighty-five miles north of Milwaukee. While the community is the shopping center for nearby agricultural areas, it is an industrial city concentrating on aluminum products, shipbuilding and repair, and malting concerns.

The Manitowoc Public Library serves only the city of Manitowoc, population 32,275. Although there is no county library service, Manitowoc is the county seat, and plans have been considered for county service through the Manitowoc Library. This has been taken into consideration in the library's building program.

The Manitowoc Public Library was founded in 1900, and moved into its Carnegie building in 1903. The building contains 13,400 square feet of floor space on three levels. While the building exterior remains imposing in appearance, the interior leaves much to be desired. At the present time, through the use of drawer-type stacks, some 30,000 adult nonfiction books are condensed into the area designed for 11,000. The library board, recognizing that this was an unsatisfactory solution to part of the problem of crowding, hired a consultant to conduct a building survey in 1959. Mr. Frederick Wezeman recommended that the board consider replacing the present library building in two stages: first, planning an addition and, secondly, replacing the present building with a new structure. This plan was adopted by the board; an architect, Mr. Perc Brandt, was hired; and plans for the addition, stage one, were prepared.

When the plans for the addition were presented to the city council last December, the board was directed to investigate costs of an entirely new building at another site. The council felt that the estimated cost of the addition—$350,000—would not be using the tax dollar wisely. If the cost of a new building was not too much above that of the proposed addition, the promise was to include the library building in a spring bond issue. The building plans presented here this evening were thus designed during the following six weeks.

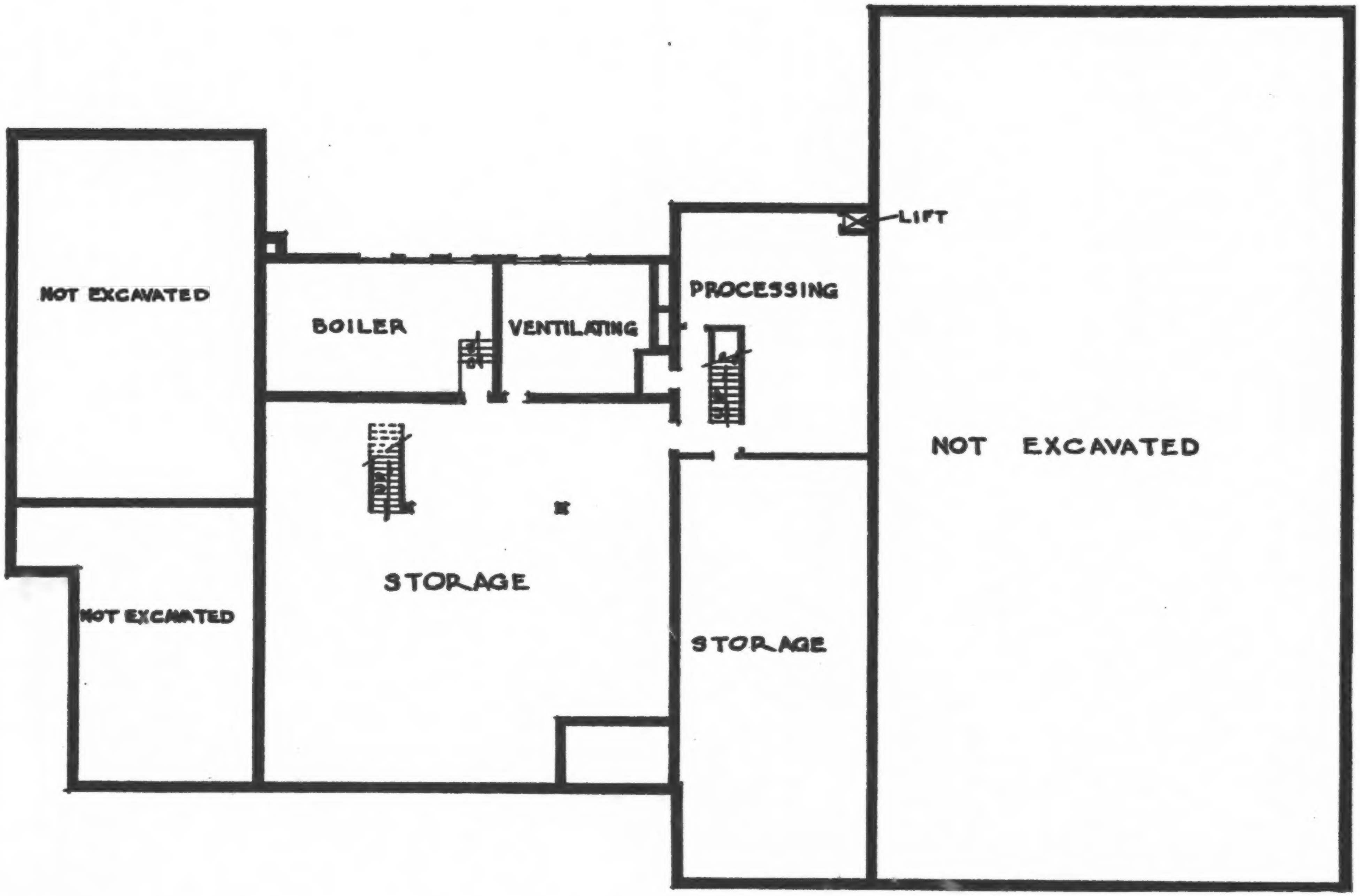
The plans for the new Manitowoc Public Library were designed for a downtown park located on the main two-way street, carrying traffic east and west into the main shopping area. The park is well located in relationship to the business district, the county buildings, and the post office. The site measures 300 feet by 250 feet. The area to be utilized by the library building will be 116 feet by 180 feet, with the building placed near the street and facing north. A driveway and parking lot to the rear of the building will be provided for staff and delivery purposes. It is not necessary, however, to provide patron parking as there is adequate on-street parking in the area.

Cost estimates

After these plans were drawn, our architect estimated that the new construction would cost $315,000, with additional amounts of $69,000 for equipment and $35,900 for landscaping, architects' fees, and contingencies. This is a total of $419,900, which pleased the city finance committee and assured their support for a new building rather than for an addition.

In our building program we stressed the following points:

1. It was extremely important to have all public service areas on one floor.
2. A central control point was needed in order to provide as much supervision as possible with a minimum staff.
3. The adult department was to have an open arrangement in order to allow flexibility of services.
4. An inviting browsing area that could be seen from the street was the "must" of one of our board members.
5. A meeting room with seating for about 100 was desirable. Here there was some resistance by some members of the city council who felt that the city should not be providing meeting space.


NOT EXCAVATED
BOILER
VENTILATING
PROCESSING
LIFT
NOT EXCAVATED
STORAGE
NOT EXCAVATED
STORAGE

Perc Brandt

Manitowoc Public Library
Basement

6. With the imposing stairway to our Carnegie building in mind, we stressed a ground-floor entrance. Also, a separate entrance for the children's department was planned, to be used mainly when classroom visits were planned.
7. Air conditioning was not necessary in Manitowoc since the temperature seldom reaches 80°.
8. Open shelving for all the book collection was desired.

The adult department is on the ground floor. It is 90 feet by 116 feet and has 10,440 square feet. Book capacity, including the mezzanine, is estimated at 70,000 volumes. The charging desk is located to give good control of the lobby, the entire adult department, the rest rooms, and access to the offices. There is a workroom adjacent to the circulation desk, which is designed to serve the reference department in addition.

The browsing area is located at the front of the building, and extensive use of glass is planned for this part of the building. This should be no problem, as it is a north exposure. The reference department and card catalog are very near the circulation desk, which is important for a library with a small staff. Shelving is planned for a reference collection which can reach 5,000 volumes, and a special section will be designed for *Readers' Guide* and other services.

The young adult section is planned as a minimum area for a type of transitional library service. Hence, there is only a small book collection and 4 tables. It has been placed at the rear of the building, in order to dispel the idea that the library is only for students. The section is near the reference department and the recordings collection, both used heavily by our students. Incidentally, our recordings collection is mainly a browsing one, but it is uncertain whether the present location will be satisfactory.

Space is provided in the periodicals section for 220 current titles with back issues to be shelved in the mezzanine directly above. The public rest rooms will be controlled by key. The receiving room is located for delivery, and will also house library supplies. The booklift will serve the mezzanine, for shelving purposes, and also the technical processing center directly below.

Children's department

The children's department is a room 36 feet by 64 feet, providing 2,304 square feet. Its book capacity is 13,500 volumes, and seating capacity is 44. The picture book section will be a corner near the door to keep the three- and four-year-olds from causing a commotion as they enter the room. The reference section is to be located along the front of the building.

As our present meeting room is used most heavily by our children's department, it seemed wisest to locate the new one likewise. It has the use of the separate children's entrance. The hall to the adult department can be closed for evening meetings. Boys' and girls' rest rooms can also serve the meeting room. The workroom is placed so as to furnish control of the department during off hours. Our present children's room is on the second floor, and the department wished to continue the practice of an individual desk in the new building.

The mezzanine concept is a holdover from our plans for the addition, yet it provides an economical method of handling a book collection. Also there is a quiet study area there which is highly desirable. The Manitowoc Room is a bonus provided by the architect as he planned the ventilating system. It will give us a room for local history and special collections, as well as space for small committee meetings.

The basement area houses the boiler and the ventilating equipment. This is the storage area for adult and juvenile extension work. The technical processing area may not be large enough, but it should not be too difficult to change the north wall location. This is our plan. We hope it is going to materialize.

ROGER FRANCIS

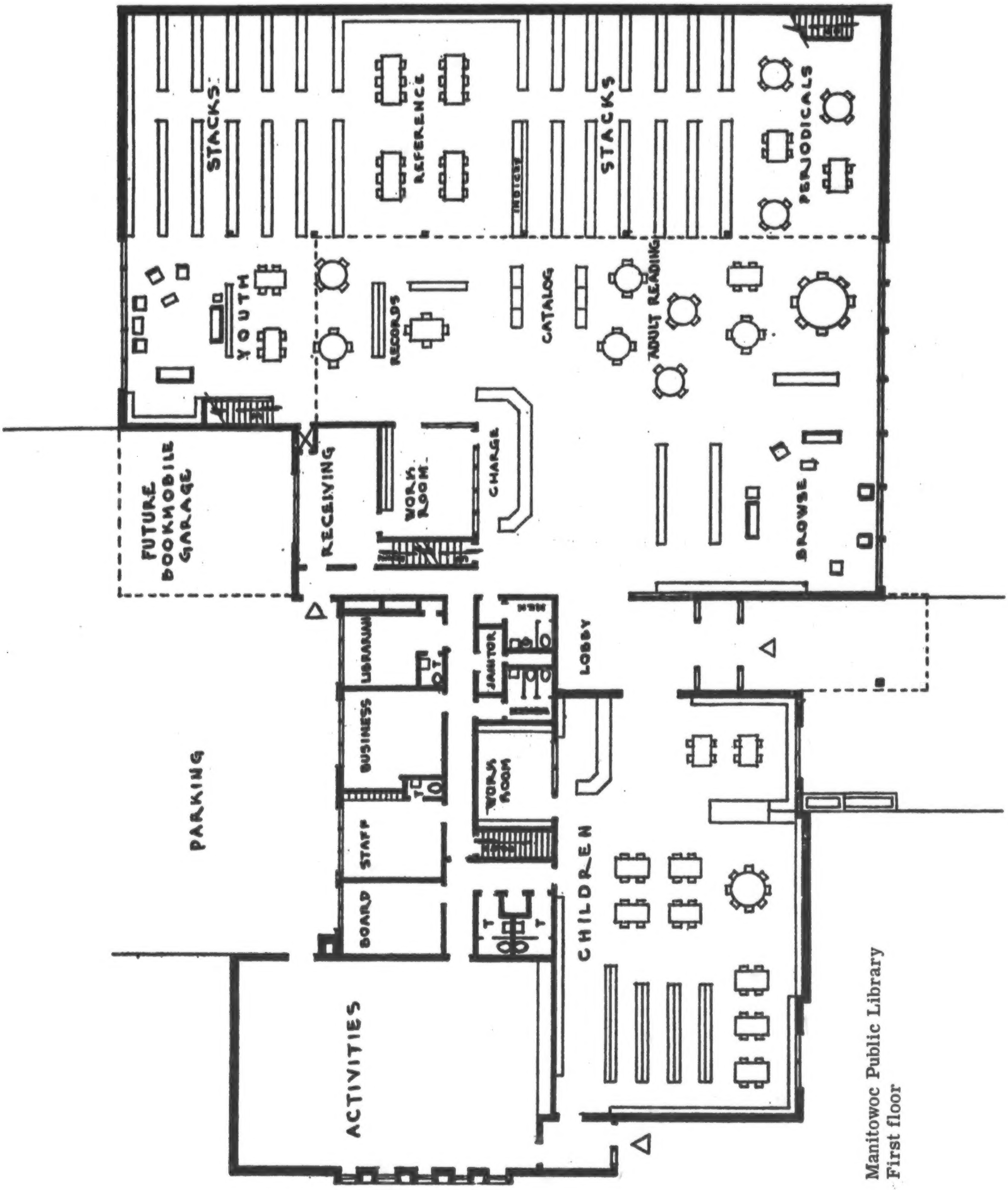
The total area provided in the building—the seating capacity, as well as the book capacity—is apparently adequate for the anticipated service to be rendered in the building. In fact, it exceeds the requirements that Fred Wezeman spelled out in his survey of the building a few years ago.

On the first floor, in the periodicals area, there is a solid wall where it would be nice to have more glass along the front of the building. The library's location in the park will bring it up to the sidewalk. Thus, an open frontage for people to see into the building, if the street is heavily traveled, would be much better. The windows need not be clear to the ground, but could have low shelving along the front, perhaps three shelves high, with a ledge to display books to the people passing by outside.

In the children's room, in front, there is a solid wall in the center. Here, again, complete glass seems more satisfactory. The two sets of windows look rather small. Mrs. Kelly tells me the staff wanted to get more wall shelving, and this was one way they thought they could do it.

The adult section is satisfactory, except that the reference section might be moved closer to the periodicals collection. One tier of stacks could be left to separate the periodicals collection from the reference area. One of the problems with this suggestion is that the staff would be getting farther away from the reference collection if they had to cover both the service desk and the reference collection.

Another problem is the youth section. The teenagers are in what appears to be a blind corner. This might pose some problems, since this area is next to the stairway that goes up to the mezzanine. My


STACKS
REFERENCE
INDEXES
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PERIODICALS
YOUTH
RECORDS
CATALOG
ADULT READING
FUTURE BOOKMOBILE GARAGE
RECEIVING
WORK ROOM
CHARGE
BROWSE
LIBRARIAN
O.T.
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BOARD
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WOMEN
LOBBY
WORK ROOM
T
T
CHILDREN
PARKING
ACTIVITIES

Manitowoc Public Library
First floor

suggestion would be to move the youth department into the reference area and make the back of the building the stack area.

Administrative areas

Now we turn to the administrative and the nonpublic areas. The men's rest room is just opposite the desk. The women's rest room is located so that one has to go into the corridor, past the librarian's office, and by the business office for access to it. Since the room will be controlled with a key, perhaps this won't be as much of a problem as it might be. It might be wise to turn both these facilities around a quarter of a circle, and have both of the doors opposite the desk.

It is not anticipated that the children's room toilet facilities will be controlled by keys. My first impression would be to turn those facilities around a quarter of a circle, and have both of these doors open into the children's room. As now located, they do provide facilities for the activities room.

The staff will get quite a workout if they have to go from their workroom or service desk to the basement storage stacks for material. The stairway might be arranged to open into their workroom, if they are the people who will be using it most. Also, there should be a door at the back of the children's workroom, into the staff corridor. Otherwise, if the staff wish to use the staff facilities, they will have to go around, making a longer trip. It might prove wise to combine the librarian's office and the board room, since the latter is used only infrequently.

The activities room seems long. If it is to be used for large public meetings, fine. But if it is to be used primarily for children's programs, isn't it a little large? If the windows are going to be there, they should be open windows, since this is a park location and there would be a pleasant view outside.

The librarian's office is small, and the business office a little large. The toilet room in the closet right at the entrance of the librarian's office might be moved over to the side, so one comes directly into the librarian's office. It should not, however, be put at the back because a nice view of the park may be seen from there.

The processing department in the basement bothers me even though Mrs. Kelly tells me the staff is presently doing its processing in the basement. I would suggest moving it up to the first floor. Take the space that is marked for the future bookmobile garage, make this the receiving department, and put processing where receiving is now located. It then would be directly behind the workroom of the adult department. This would be better than the up-and-down movement of staff on stairways and of books on booklifts. The future bookmobile garage could be attached to the rear of the activities room. It would add to the cost, but it might be worth consideration.

In connection with the mezzanine, consideration should be given to moving the youth study area to the front of the building. As it stands, the young people are next to a stairway where they can run up and down. Also, on the mezzanine, there is a quiet study area. It is a long way from the adult circulation desk, and the line of supervision would not cover much of it. If the mezzanine is fairly open, it might be well to rearrange the location, placing the study tables along the edge of the balcony so that the staff on the floor below can supervise.

DISCUSSION

Comment: It seems that no matter where the teenagers are put in a new library, no one is completely satisfied.

MR. FRANCIS: It might be better to have the study area at the rear rather than forward where the lounge area is. The lounge area was placed there so that patrons could look out the window onto the park. But this, again, is a rather isolated area some distance from supervision, and my suggestion would be to move it over to the side. I assume that the youth room is a recreational room and that the students use the adult collection for their actual schoolwork. If this is their recreational collection, this is one reason, maybe, that you put it to the side. It is not an incremental part of the library, as adult research and study.

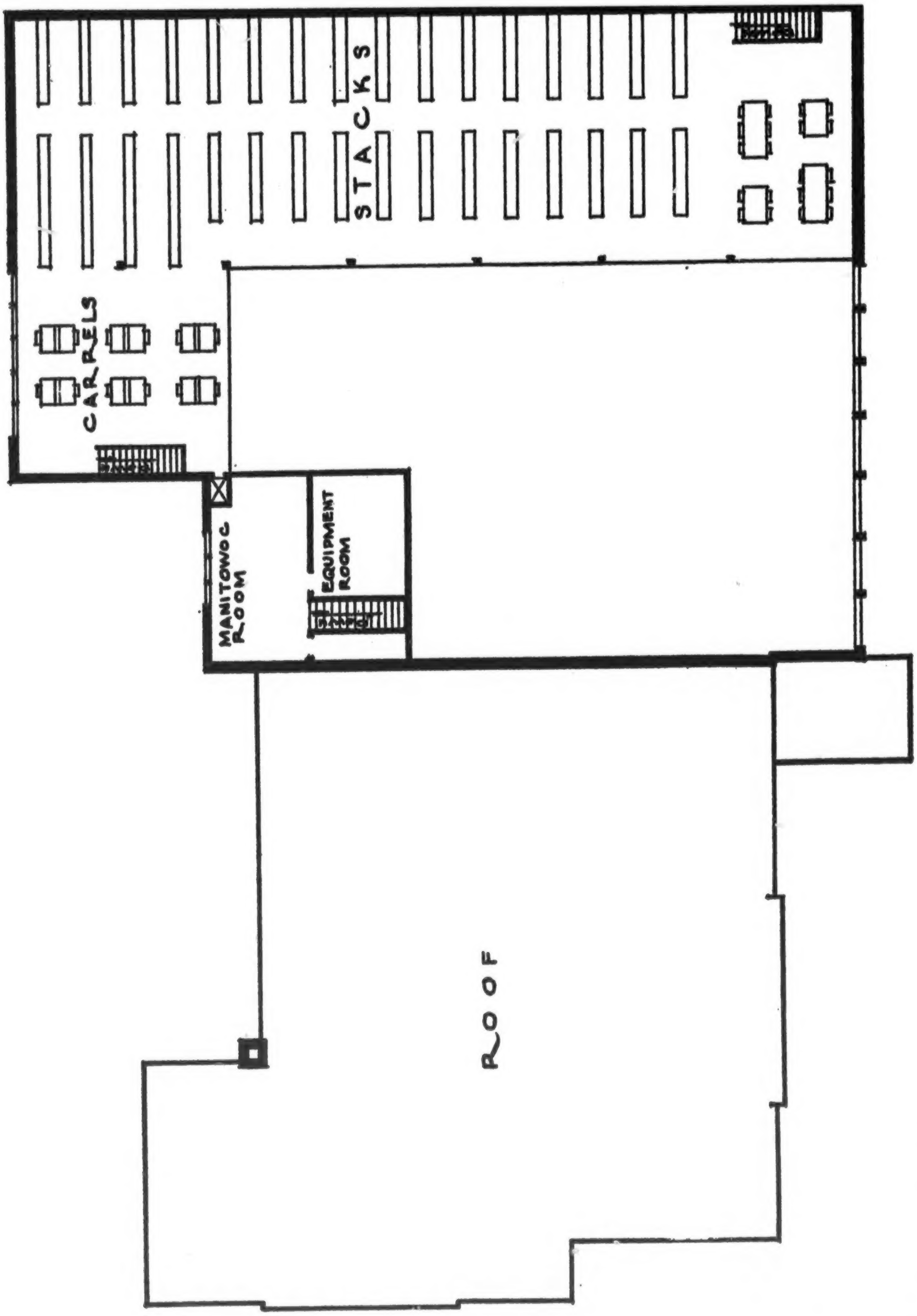
I have seen a building in which the young adults department was located in the front window. In the mid-morning, to all intents and purposes, the library was vacant. In our planning, we made it very clear that we did not want the high school section up at the front where people see empty tables and chairs until three-thirty or four in the afternoon. This is bad psychology.

Comment: You should excavate the whole basement, because the library thirty years from now will need that space. If you don't have the money to excavate all of it, then you should do at least the area under the stacks. Also, I wonder if the librarian is justified in having two circulation desks.

MRS. KELLY: Since we have always had two circulation desks, this is somewhat of a compromise we are making in order to satisfy the board. We are planning our central desk so that it can control the children's department to a certain extent.

Question: During busy times don't you think it would be nice for there to be a small desk at which the reference librarian could sit?

MRS. KELLY: There will be one. It is not located on the floor plan, but we do provide that service.


STACKS
CARRELS
MANITOWOC ROOM
EQUIPMENT ROOM
ROOF

Manitowoc Public Library
Mezzanine floor

Question: It would be desirable to move the stairway forward to have better supervision of the people coming down. Could it be pulled forward so that it would be on the end of what is now labeled the receiving room? At the same time, there ought to be another stairway for the reference person to use for books on the mezzanine.

Also, many people will say that if you are going to require this extra space off the main floor, it would be better to have a second floor. Yet the mezzanine space is a great deal more economical per square foot than a real second floor. For example, you have to staff a second floor for supervision. With a mezzanine there is a lot of floor space without too much cost.

In the children's room, you might turn the bookcases around at right angles to the rear wall. You will get a lot more book space, and keep the children away from the front window. You still have 100 percent supervision.

What is the partition for between the receiving room and the workroom? Why can't that area be thrown into one large space, and that back wall pushed back as far as you need for those two combined purposes? If money is a problem, I think the architect could have chosen a cheaper structure instead of this complicated perimeter.

MRS. KELLY: Our architect has been very successful in his cost estimates, and feels that he can do this building for the cost that he has estimated. He has done two other public buildings in the last year, and he has been under his estimate.

Question: I question the wisdom of having a round table that seats 8 people, because 8 people will never sit at the table.

Comment: On the matter of the tables in the reference room—where we provide single study tables and 4-place round tables, almost without exception the single tables are occupied first. Then there is one person at each of the smaller round tables as long as there is such space.

Question: I would like to inquire about the use of the equipment room up on the mezzanine.

MRS. KELLY: That is ventilating equipment.

Comment: I notice that the library will be in an area where it is often 30°-40°, and youngsters will be coming in with coats. Usually half the available seating space will be taken up with coats and equipment. Yet there seems to be no arrangement made for this problem.

Question: What about microfilms? Are they planned for?

MRS. KELLY: The microfilms will be located in the reference department.

Comment: The librarian will have a great deal of contact with the person in the business office. These two offices might be more closely connected.

Comment: There seems to be a lack of work space for the reference desk. If the reference area is brought up to date and a professional staff developed, they will need a place to work out difficult questions and choose their book selection. For that reason, I would second the suggestion that the workroom and receiving room be put into one room, which allows for flexibility in the library.

Comment: In one of our buildings we used too much glass space. The western and southern elevations were entirely glass. Our air conditioning costs us $500 a month in the summer. If you use too much glass, you are spending too much money for heat in the wintertime, too much for air conditioning in the summertime, and you lose the benefit of the wall shelving.

Lake County Public Library District

Lake County, Indiana

STATISTICAL DATA

Architect: Coleman & Coleman, Chicago, Illinois
Type of libraries: Library Center and county branch libraries

Library Center and Branch Library, Merrillville, Indiana
Type of library: Administrative and processing center and county branch
Population to be served: 160,000 (present population)
Area: 19,500 square feet (Library Center); 3,512 square feet (county branch)
Cost per square foot: $24

Cedar Lake Public Library, Cedar Lake, Indiana
Type of library: County branch
Population to be served: 10,000
Area: 4,100 square feet
Book capacity: 18,000 volumes
Seating capacity: 48
Cost:
Equipment: $5,112
Building: $70,347
Site: $5,000
Cost per square foot: $17 (estimated construction cost)

St. John Public Library, St. John, Indiana
Type of library: County branch
Area: 3,750 square feet
(Other factors now unknown)

Highland Public Library, Highland, Indiana
Type of library: County branch
Population to be served: 18,000
Area: 9,631 square feet
Book capacity: Unknown
Seating capacity: 100
Cost:
Equipment: $15,000
Building: $145,000
Cost per square foot: $15 (construction cost)

PRESENTATION OF PLANS

Librarian: William Shore

Architect: Fred Coleman

Critics: Mrs. Susanna Alexander, Librarian, Daniel Boone Regional Library, Columbia, Missouri

Everett Sanders, Librarian, Springfield and Greene County Libraries, Springfield, Missouri

WILLIAM SHORE

The building program which confronts us is basically quite simple. With the exception of the three new library buildings which we have completed this last year, every one of the dozen other buildings needed to serve as a library agency in our system is either woefully inadequate or nonexistent. Therefore, we must build simultaneously all those buildings necessary for a complete library system. Our presentation is not one of planning and construction of one library, but rather is the presentation of the planning and construction of an entire library system.

Four years ago, the Lake County Public Library had the rare opportunity of planning, organizing, and developing a county station along the lines of regional library operation. Prior to this time nine small libraries, spread over approximately 240 miles, had contracted for service from the nearby municipal library. As a general rule, the standard of service was poor, with a token book stock, dilapidated buildings, a small staff, and no future prospects of being open more than twelve to twenty-four hours a week.

To obtain better or complete library service, it became necessary to discontinue contract service and establish a separate library system. After the initial break was accomplished, libraries of all types throughout the United States were contacted in an effort to obtain procedures, systems, and ideas on how to provide the best possible service and at the same time operate within a relatively small budget.

Each one of our libraries, which are now fourteen in number, is situated in small population areas and is treated as an individual community library. There is no large central library with its usual function. Rather, there is a rather small administrative and technical processing center that takes care of general acquisition, book processing, and book control for the community libraries.

Coordinating sections of the respective personnel in the areas of children's books, adult education, and advanced practices are utilized to plan and instruct effectively in their various spheres of activity. The entire holdings of the library system are considered as a single system, with many materials duplicated in each library. However, little-used but necessary books can be purchased in single copies and utilized by the entire system. This not only is an economy in the book budget, but reflects the best use in the universal library problem of not enough shelf space.

Each individual library has a complete printed unit catalog of the entire holdings of the entire library. All libraries in our system are connected with closed circuit teletype to accomplish circulation control, administrative directive, monthly status reports, and reference requests. Daily courier service throughout the system is a necessary supplement. Machine processing, which is a vital part of our operation, is accomplished efficiently and economically through the use of International Business Machines.

Building finance

The money for library buildings and operation in our particular service area comes from the property tax levied on all real and personal property throughout the service area. The taxing situation is such that we are able to bond ourselves at this time for approximately $1,500,000, and to maintain an annual operating budget of some $500,000-$600,000 a year.

The three buildings we have completed during this past year were built from accumulated library improvement reserve funds. This fund is sufficient to build one library a year. But since we have eleven communities at the present time that need libraries immediately, we must float a bond issue.

The Lake County Library District is composed of a tier of townships through the center of the county, lying directly south of the large metropolitan cities skirting Lake Michigan: Hammond, Whiting, East Chicago, and Gary. It is about forty miles southeast of Chicago. It includes four townships and parts of two other townships. It is some fifteen miles long and sixteen miles deep, and at the present time has a population of around 160,000. The population growth during the past ten years has been 108 percent. This population growth rate is projected to continue for at least another ten years, and very likely for another twenty years.

The building growth of the entire area is very largely composed of large subdevelopments of single family housing. The homes themselves are not particularly oriented to single shopping areas or single communities. Rather, housing areas are spread wide. So the growth is a conglomerate mass, rather than isolated community groupings. There is no considered community plan in this area. We make use of our best judgment and common sense as to planning for future library locations. To a very large degree, the libraries that we have planned will be built in the general area of old locations.

Each community will receive a library which has sufficient area and roughly the same amount of books no matter how many people are in the area, because one child and one adult need to be educated or given cultural sustenance just as much as an entire community. We are building libraries in each individual community from the taxes that are gathered throughout the large service area.

FRED COLEMAN

The first point that we want to make clear is the fact that the Library Center, in our particular situation, is not a central library. It is a center for ordering and processing books and for the administrative work connected with the library. Any books which are stored in the Library Center are either books in transit or books on which repair work or processing work has to be done. In the Center we have a capability of storing only about 10 percent of our total number of volumes. The ordering is done by the director of the libraries and by the acquisitions librarian. When the order list is made up, it is sent into the central file room to check against previous orders.

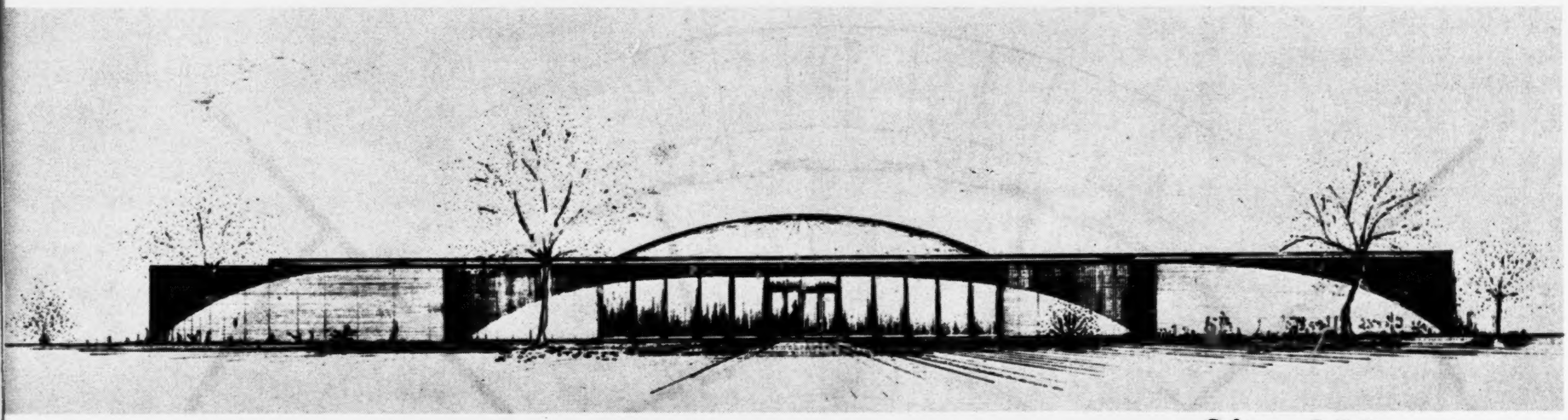
Every operation dealing with the processing of books eventually comes to this central file area. When the books are received, they are taken into the processing section. Here the books are checked against the cards in the files and are then sent on into IBM to be processed. When they come from IBM, they go into the processing area where the book pockets are inserted and labels added. Finally, they are stored temporarily in the stacks or go back out into the shipping area to be distributed to the various libraries. The stacks for reference and bibliography are used quite heavily both by personnel in the filing area and by supervisory personnel. These stacks are so arranged that they are accessible to both groups. The financial and maintenance ends are both disconnected from the processing center. People in these areas are not physically involved with the operation of this particular core area and need only be interconnected by intercom.

Library Center

We will now go into our proposed new Library Center. The site for this building has not been selected. We are dealing primarily with open prairie and, therefore, the site selection is not actually mandatory before such a building is designed. Also, the building itself is going to determine the size of the site. With both the Library Center and our community libraries, our patrons primarily will drive to these facilities. Our population is so widely dispersed that it is impossible to locate these facilities adjacent to the mass of the population. This, too, allows us far more freedom in site selection.

A written program has been developed which states the library's needs in the Library Center. As architect, I have replied to this written program with a written proposition and a written analysis of my observations of their operation.

The proposed Library Center is 228 feet in diameter and contains 19,500 square feet. A piece of property is needed approximately five acres in size, or a frontage of about 400 feet and a depth of approximately 500 feet. The employee parking is at the rear of the building, and the employees will enter through the garden area. There are two small parking areas, one to either side of the building. The drives will be one-way so that there will be a circu-



Coleman & Coleman, Architects

Lake County Public Library Center
and Branch Library
Architect's rendering

lar flow of traffic around the building and into the various parking areas.

The building follows very closely the work flow. The central core, or hub, is really the heart of the entire operation. Surrounding this central core or processing center are shipping and receiving, the bindery, supervisor's areas, IBM room, a small graphic arts room, secretarial area, administrative area, board room, employees' lounge, lunchroom, toilet facilities, maintenance area, garage area, and boiler room. The annular area immediately adjacent to the processing center contains those people most actively involved with this particular center.

Offices

The bottom quadrant of this ring contains the offices of the assistant director, administrative assistant, supervising librarian, and comptroller. Immediately in front of them is the secretarial space. One secretary can probably handle the work of two or three of these particular individuals, but we have provided enough space if each of them needs his own secretary. The individuals in this ring are immediately in charge of the processing area. These people are also fairly adjacent to the main entrance, as is the director. This is done primarily because these are the individuals who will be interviewing book salesmen and outside personnel.

The board room also is adjacent to the main entrance, due to the fact that the public will attend the board meetings, as well as adjacent to the director's office so that it can, if necessary, be used as a caucus room. This board room will serve many functions: as a meeting room, as a teaching room, for instruction of the staff, and as a conference room. The next room contains the employees' lounge area and toilet rooms. Both of these rooms, as well as the director's office, look out into a garden court area. In the lower quadrant there is also a meeting room for adult education classes and special service lectures that the Library Center will present.

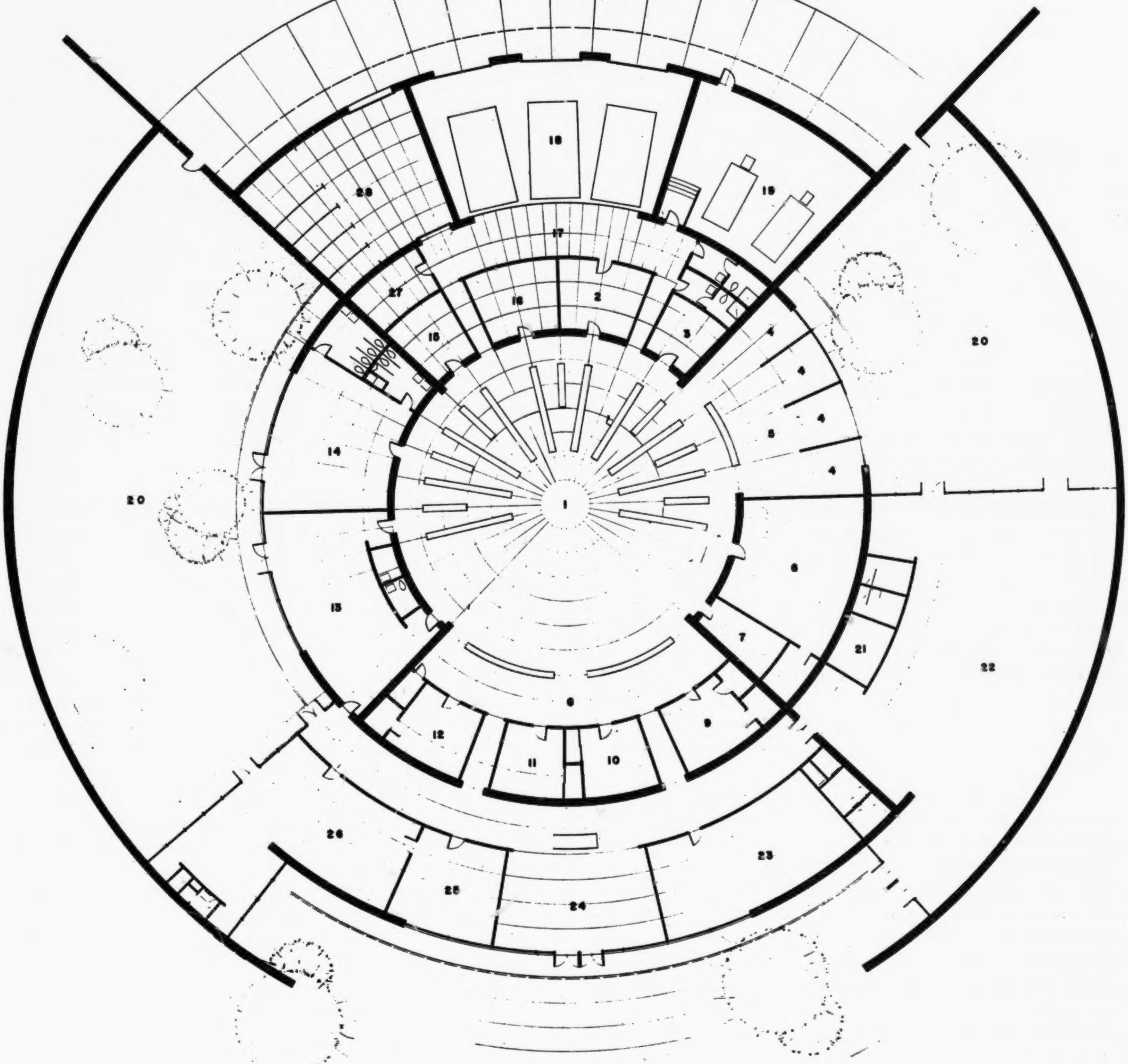
Supervisor's area

In the right-hand quadrant are the IBM Room, which we are going to soundproof, and the reproduction department which will serve the entire Center. Next to this is the supervisor's area. These supervisors will consist of the children's supervisor, the reference librarian, possibly a public relations individual, and the adult education supervisor.

These individuals are people who are in and out of the building quite often and really do not need a great amount of privacy. There will probably be one or two secretaries serving all of these individuals. These supervisors would have a certain amount of storage in their own cubicles and also have access to the general reference collection.

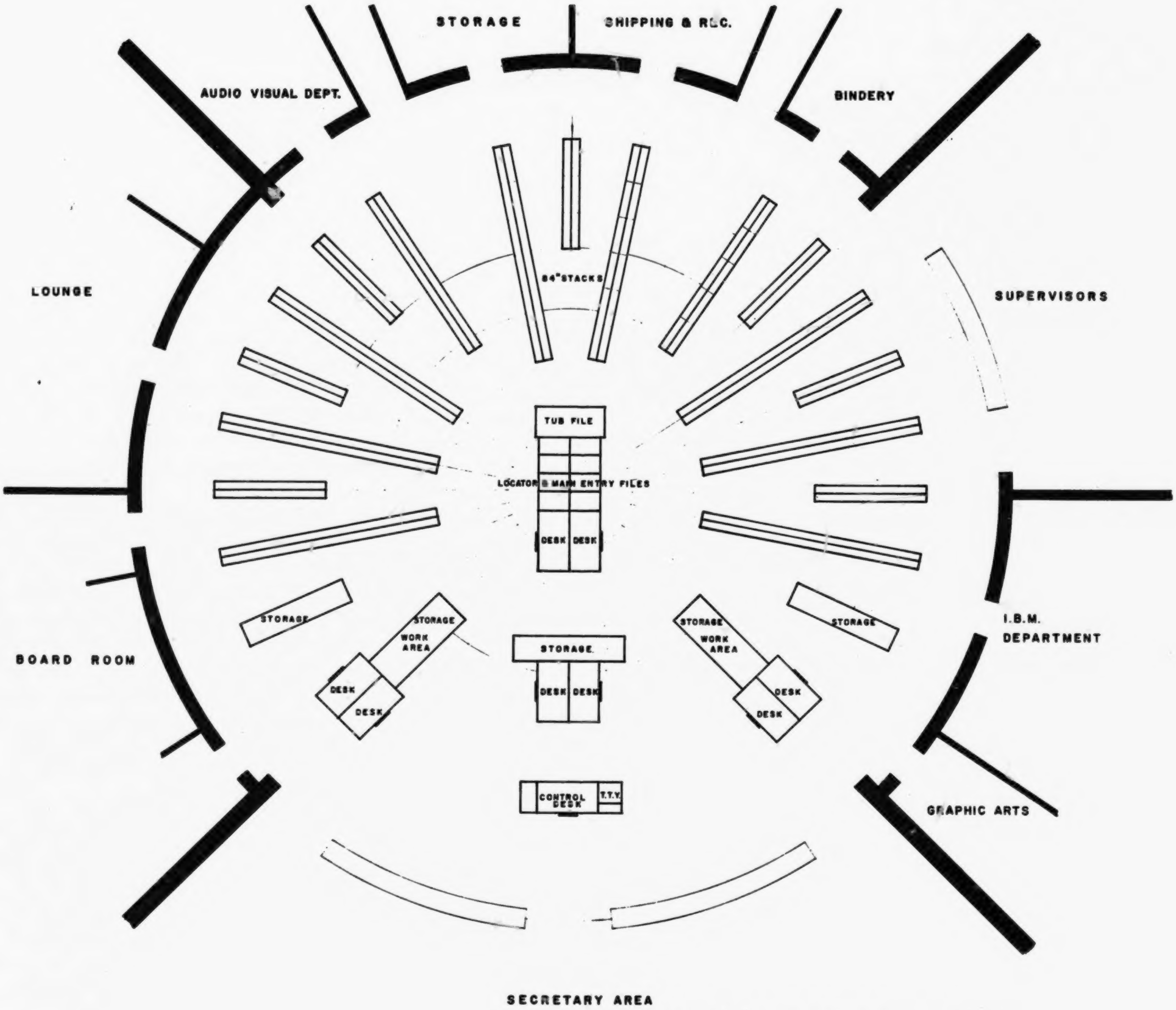
In the rear quadrant are located the boiler room, toilet facilities for the maintenance and janitorial people, a small bindery for minor repairs, and the shipping and receiving departments. The shipping dock, which will allow us to pull our vehicles inside so that we can function properly in inclement weather, is located here. Also included is a large storage room, the audio-visual department which eventually will have a full-time individual, the maintenance supervisor's office, and his storage and work area. With a system of this size, we are going to have to do a certain amount of maintenance such as minor furniture repairs, plumbing, and electrical work. There will be adequate storage and shops in this particular area to do these things.

We are able to use all standard equipment and furnishings since the areas at the wall, or the periphery of the building, are used primarily as passage areas. We have attempted to make this building as flexible as possible by keeping the struc-



Lake County Public Library Center and Branch Library Floor plan

1 processing center
2 shipping and receiving
3 bindery
4 supervisors' offices
5 secretary
6 IBM department
7 graphic arts
8 secretary area
9 comptroller
10 head librarian
11 adm. assistant
12 assistant director
13 board room
14 lounge and lunch room
15 audio-visual department
16 general storage
17 shipping dock
18 garage
19 boiler room
20 garden areas
21 office and storage
22 community library
23 meeting room
24 lobby
25 secretary
26 director
27 maintenance supt.
28 maintenance shop


STORAGE
SHIPPING & REC.
AUDIO VISUAL DEPT.
BINDERY
LOUNGE
SUPERVISORS
84" STACKS
TUB FILE
LOCATOR & MAIN ENTRY FILES
DESK
DESK
STORAGE
STORAGE
WORK AREA
STORAGE
STORAGE
WORK AREA
STORAGE
DESK
DESK
DESK
DESK
DESK
DESK
BOARD ROOM
I.B.M. DEPARTMENT
CONTROL DESK
T.T.Y.
GRAPHIC ARTS
SECRETARY AREA

Lake County Public Library Center
and Branch Library
Technical processing center area

ture fairly independent of the actual subdivision of the building itself. There are very few walls in the building which cannot be moved, if necessary, to conform to the changing needs of the library. We feel that we have planned for the ultimate expansion that we will need. Should any expansion become necessary, it can be added on in the garden area in the outer ring.

We have planned a small community library in conjunction with the Library Center. This library is a completely separate entity from the Library Center and will function separately. In Merrillville, where the Center will be located, there is a need for a new community library. For the sake of economy we have built it in conjunction with the Center. This library will function exactly as the other small community libraries. The only real interaction between this and the Library Center will be in the use of the meeting room.

MRS. SUSANNA ALEXANDER

The ideas Mr. Coleman and Mr. Shore are projecting to us today will undergo changes again and again before these buildings are a reality, since they have developed something considerably different from what most of us think of in terms of a total library program. The philosophy of the library program certainly enters into the criticisms of the plan, because the whole program is designed around a philosophy of how to serve a scattered population throughout the county area.

Our first question is the question of designing this service center building before the planners have the site selected or know where the building is to be placed. The materials are going to feed out from here to all of the community libraries. It seems logical, therefore, that the building will be located in the central location of not only the present service area but also the potential service area of this library. If the service center is located in the right site for a community library, this is fine. But we would not want to put a community library here just because it would become a part of this building.

Another question is on the circular work-flow plan. We wonder if the architects, by placing this work area in the center with all the other areas around it, are perhaps limiting the possibility of expansion here. It appears on the plan that when the Center has reached a volume of 45,000 or 50,000 books yearly in processing, it may not have any place to expand to move these materials. We have been assured by Mr. Coleman, however, that this is a flexible plan. Working walls are being used here, and it will be quite possible to enlarge the center area.

Concrete dome

In the building there is a concrete dome, which means that there is no outside light in the center of the building. We are concerned about the people who are going to be working in some of the office spaces where they actually have no outside light.

Mr. Coleman mentioned the IBM Room which appears to be right next to the community library. While there are wonderful ways of insulating walls, we also need to be sure that the room is completely soundproof. Otherwise, this can present quite a hazard.

Another question is, where are the people in this area going for their reference service in depth? As yet, the system has not reached a point where it is giving reference service in depth. When it does, it anticipates that the service will be located in this service center, because this is where the basic mimeographic materials and the lesser-used materials are. Again, this projected use would be a most important consideration in the location of this building, because if this is to become something more than a service center and community library, the possibility must be taken into consideration now.

EVERETT SANDERS

In breaking up a reference collection, which Mr. Shore proposes to do, and depending entirely on the communication and messenger services, it is going to pose a problem for the busy person wanting to use some reference or research material. He would have to wait until the book was located at a certain library and brought to the point where he was waiting for it; and then it may not be adequate to answer his questions. Instead of periodicals, microcards will be used which probably are sufficient. They could be put in each of the branch libraries.

DISCUSSION

Question: According to this proposal, this library is going to cost approximately $24 a square foot. What is the cost of schools in your area?

MR. COLEMAN: Our schools in this particular area, the Chicago-Calumet Region, have been built as low as $11.36 a square foot and up to as much as $28 a square foot. This is all relative to exactly what is put into them. The average would be about $20 a square foot for a school within an urban complex.

Question: Do you feel you can justify $24 a square foot to the public on a bond issue?

MR. COLEMAN: We have tried, in all of our buildings, not to use particularly the cheapest materials. The materials that, over a long period of time, need the least maintenance are most likely to become the most reasonable. No doubt the building could be built cheaper, but then as much will be put into it over the period as the original cost of the building. This certainly is not economy.

Question: What is the comparative cost between this circular building and one of the same area that might be square or rectangular?

MR. SHORE: You can enclose the greatest area by using a periphery, by using a circle. This is one of our premises. The cost would be quite comparable, because of the fact that we will go into thin-shell concrete on the dome and have a large work area that will give complete flexibility without interior support.

Question: If this is to be basically a processing center, why should the size of the lot required be 400 x 500 feet? That seems to be an excessive amount of lot for a limited number of people.

MR. SHORE: We probably will not be able to get this much land. This is what we would like to have in order to create a certain setting for the building.

Comment: Since the architect is using a thin-shell concrete structure, he must believe in it. It is very efficient, I know, but there always seems to be a maintenance problem.

MR. SHORE: I think this is a question of size, and we are dealing with a dome of 70-foot span. I think we are at the size where it can be controlled properly. This has always been one of the big arguments in the architectural and engineering professions. These things can be done easily in South America and Mexico, where there is a constant temperature. We have 30°-40° changes in temperature, and this is a valid criticism.

Question: Is it possible to raise the whole shell and put in a vertical skylight for the inner offices?

MR. COLEMAN: This is possible. Right now we are not thinking in these terms. With clerical work, particularly in the reading of IBM cards and bibliographical material which is quite often printed, natural light creates a difficult situation. Also, these people will have a view into the east corridor.

Question: Why is there a need for a circular building at all? What do you gain by the circular building?

MR. SHORE: My particular concern is to get an adequate building to house the technical processing which I must accomplish. Mr. Coleman has developed a circular idea. It is aesthetically pleasing to me, but the shape makes no difference so long as my operation can be put inside the building.

MR. COLEMAN: As far as we have gone with our analysis, this shape seems to give the most efficient flow and the greatest possibility for interaction among the staff.

Question: In regard to the area of the inner floor, exclusive of the offices or the grounds, would the area—apart from the stacks—be open for working?

MR. COLEMAN: The center core is around 9,000 square feet, which is many times the size of the present area. A little less than half of this would be actual working area, and the other portion would be the peripheral stacks. Remember, too, that these stacks are not going to be used to house a permanent collection.

Question: How far will a book travel before it gets to its first checking point?

MR. SHORE: Under the ideal situation it would probably travel 35 feet.

FRED COLEMAN

Cedar Lake Library

The Cedar Lake Library was completed in October of 1962. We are going to use this particular library as a prototype for other libraries. There were several problems and obstacles that we had to overcome in these small community libraries. Our first problem was being unable to provide an adequate staff. Our premise was that each of these libraries would have to be controlled visually by one individual. By the use of low planters and 42-inch bookstacks we have accomplished this. Our second problem was that of flexibility within the building itself. We have attempted, by the use of a core system, to develop a plan which would be entirely free of immovable objects such as washrooms and furnace. By doing this, we can readily rearrange the entire library to fit the changing needs of new library techniques.

The entire Cedar Lake project, unfurnished but including all architectural fees, landscaping, and exterior sidewalk work, cost $70,347, exclusive of land. This was accomplished by the use of brick, steel, concrete, and wood which, in general, retained their own characteristics in the final finishes. The exterior walls, for instance, are face brick inside and out without any plaster. We attempted to use materials which were reasonable in price, yet of a quality that would keep our maintenance costs to a minimum. The initial cost of the materials used is completely relative to the over-all cost of maintaining them over the amortization period of the building. This particular project ran approximately $17 a square foot, which in our area is an extremely reasonable price for the quality of building we obtained.

In the communities in which we are planning these libraries, we have found a very definite need for a cultural focal point. These are essentially communities that have grown without planning. We are attempting to fill this need through our building program, the landscaping, and the surrounding atmosphere. The buildings, in the areas in which we have sufficient land, will be quite open both in the interior and on the exterior. Where we are in a commercial or business district, we have walled off the rear of our building and have created our own atmosphere.

At Cedar Lake the library is in a shopping center bordered on two sides by commercial property. On the south side is a large parking lot. Just inside the main entrance are the charging desk and control point and the periodicals reading area. We have done this for a very specific reason. In these small libraries, located in or close to shopping areas, we are going to have a lot of people coming in to kill time. Thus, this area is a potential focal point and in this location is under the immediate supervision of the librarian.

The adult area on the other side of the charging desk is screened by a 42-inch planter. There are 42-inch stacks between the adult reading area and the children's area in the rear to give good visual control. On the other side, there are 84-inch stacks which are well lined in relation to the librarian, so that she can see through them.

In the back is our delivery entrance where our delivery vehicle can drop the books. The librarian can go back here to pick up the books at her convenience and put them where they belong. Here, also, is a small office for the librarian, a utility room, two washrooms, and storage and kitchen facilities.

The children's area serves a dual purpose. It is also a meeting room for discussions, adult education classes, and community use. There will be a folding wall locking across one of the window members so that this room can become a separate entity from the library. It has its own toilet facilities, storage for chairs, and kitchen facilities.

St. John Library

The next library to be presented will be the St. John Library. There are two schemes proposed for this particular library to solve the problem of the location and orientation of the building on the lot and its relationship to the main north-south highway through our section of Indiana. The highway is heavily traveled by both automobile and truck traffic, thus creating a noise problem as well as traffic hazards.

In one scheme, the parking is in the front of the building, and in the other, it is in the rear of the building. Our problem is whether we want to set the building back far enough from the highway to alleviate the noise situation, or whether we should place the building closer to the highway, solve the noise problem by the proper landscaping, and put unsightly parking to the rear. The former scheme sets the building back a good 150-170 feet. Eventually, a new parochial school is to be built immediately to the north, and to the west, a large housing development; so we feel this is probably a very good site in relation to the people we have to serve.

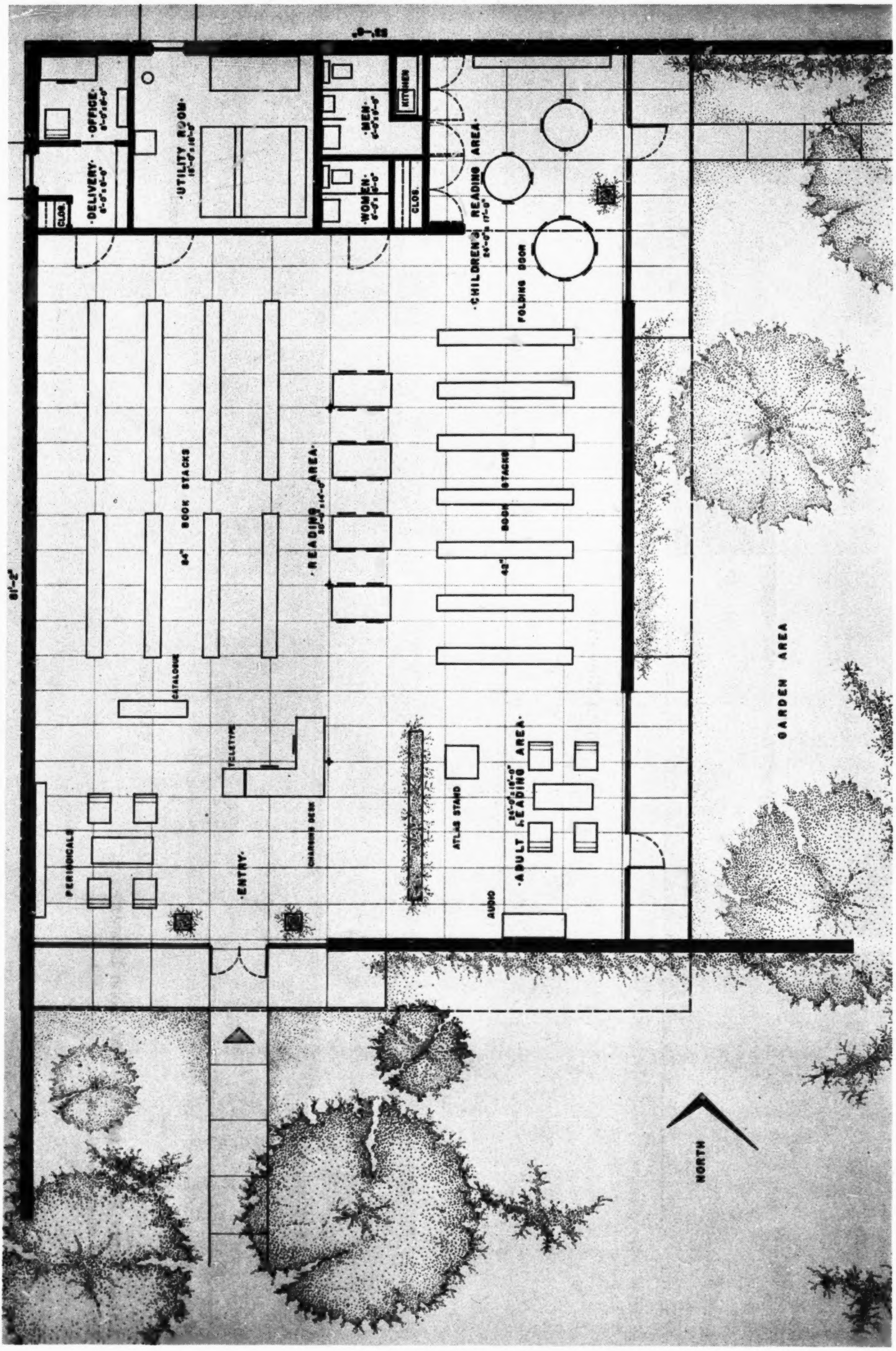
The interior arrangements in the St. John Library are similar to those of Cedar Lake. The only difference is that we are able to open the building up on three or four sides, whereas we were able to open up only on two sides in the Cedar Lake scheme.

Highland Library

The Highland Library is also presented in terms of Scheme 1 and Scheme 2. Scheme 1 proposes to retain the existing memorial library, which is very small and inadequate, and to add to it a one-story addition. There is considerable feeling in the com-

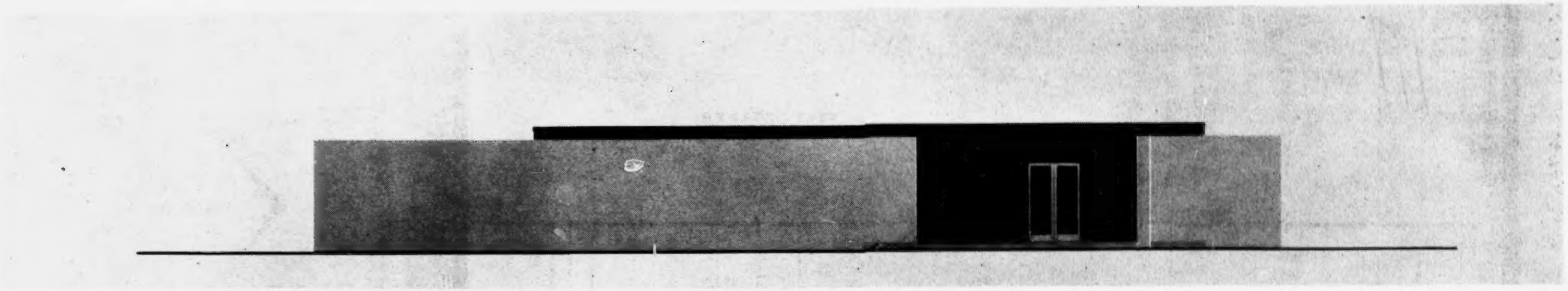
Lake County Public Library: Cedar Lake Library
West and south elevations

Wahlberg Studio, Cedar Lake, Indiana (Coleman & Coleman, Architects)

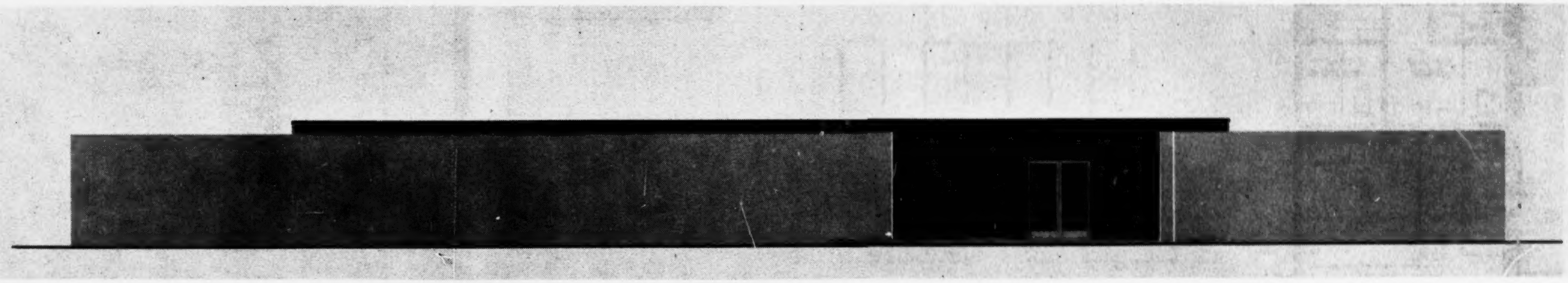

OFFICE
DELIVERY
CLOS.
UTILITY ROOM
MEN
WOMEN
KITCHEN
CLOS.
CHILDREN'S READING AREA
FOLDING DOOR
84" BOOK STACKS
READING AREA
30'-0" x 14'-0"
42" BOOK STACKS
CATALOGUE
TELETYPE
CHARGING DESK
PERIODICALS
ENTRY
ATLAS STAND
ADULT READING AREA
AUDIO
GARDEN AREA
NORTH
81'-2"
53'-6"

Lake County Public Library: Cedar Lake Library
Floor plan

Wahlberg Studio, Cedar Lake, Indiana



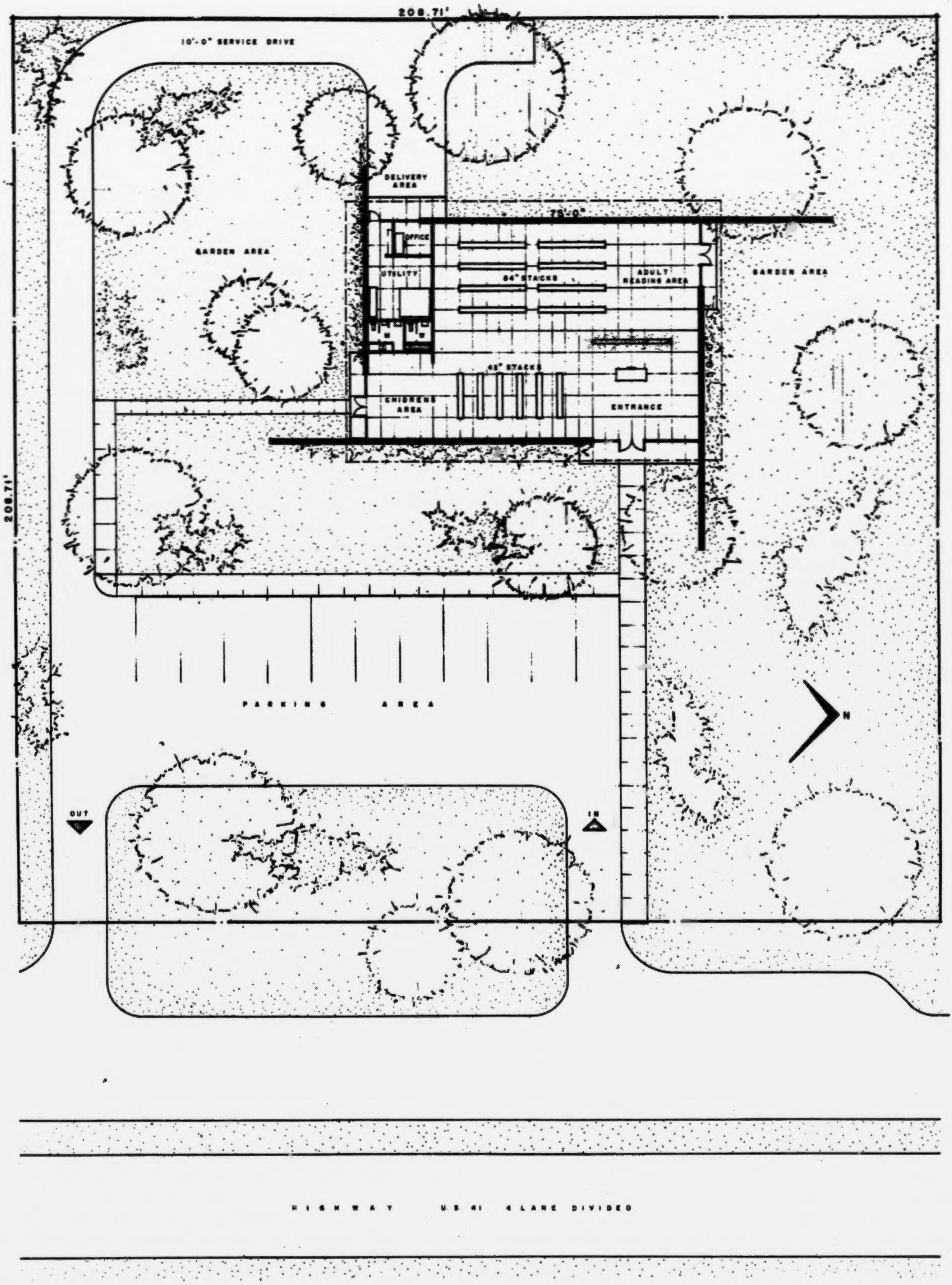
North Elevation



Coleman & Coleman, Architects

East Elevation

Lake County Public Library: St. John Library
North and east elevations


208.71'
10'-0" SERVICE DRIVE
GARDEN AREA
DELIVERY AREA
75'-0"
OFFICE
UTILITY
84" STACKS
ADULT READING AREA
GARDEN AREA
42" STACKS
CHILDRENS AREA
ENTRANCE
208.71'
PARKING AREA
N
OUT
IN
HIGHWAY U.S. 41 4 LANE DIVIDED

Lake County Public Library: St. John Library Floor plan

munity for this old building since it is a war memorial that the citizens have erected themselves. We feel that it is entirely impractical to retain this building, as we are unable, even with the new addition, to provide adequate space for community needs.

We therefore propose, in Scheme 2, to remove this existing building and to construct a two-story and basement structure that will adequately fulfill the need. With a two-story situation our control and staff problems become somewhat more complex. For example, we now find it necessary to have a minimum of two people to maintain control. The basement of this library would be used as a community meeting place.

The Highland Library is located in a commercial complex with a municipal parking lot across the street to the south. We are creating our own atmosphere for the building by the use of a reading court in the rear. With the two-story scheme we are able to provide adequate space, almost 10,000 square feet, in a three-level situation.

The lower control desk—the main control desk—is immediately adjacent to the door, and the periodicals section is again immediately under the supervision of this desk. Also, there are the 42-inch stacks for better supervision. The young adult reference and reading area, and the children's area, are in the rear immediately adjacent to what now becomes a large court. There are two stairways to the second floor halfway back on both sides of the building. The core with toilet and mechanical facilities is in the back. The second floor is devoted largely to the adult section. Eighty-four-inch stacks are being used throughout the bay with a centralized control desk. A planter divides the reference reading area from the novel reading area.

In the basement scheme there is a large meeting room which will seat 150 people quite comfortably. It is provided with toilet facilities and a small kitchen unit. The library will be located on the main street. With glass in front and the 42-inch stack, you will be able to look through the library and into the garden area in the back.

EVERETT SANDERS

In looking at the material Mr. Shore and Mr. Coleman presented, we were able to list several rather weighty questions concerning both the Center and the branch libraries. Instead of building eleven libraries like those already built, we suggest consideration be given to four large regional libraries. For example, one could be located in the heavily populated section of the northwest corner of the region and one in the corner around Cedar Lake. Probably the large Library Center, including library facilities, should be considered for Merrillville.

This territory is immature. It has not reached its fullest extent yet, and it is growing rapidly. The population will probably double in ten years, and there is no master plan for the development of the area. Consequently, it is very difficult to plan a library program. Although I believe bookmobile service is not the complete answer to library service, it could be employed here in the outlying areas. There are many housing developments with nothing else around them—no shopping centers or anything of this kind. It is very difficult to say that this is the place we are going to develop, that we will put a branch there, in such a situation.

Cedar Lake Library

The site for the Cedar Lake Library has been well chosen. There is a great deal of assurance that this site will be developed to the extent that people will be converging here for purposes other than library use. This is an important consideration. The library will serve the area at the present time, and because of the brick areas inside the base the building can be expanded. The three accesses to the library are a little difficult to supervise. I think those doors will probably be locked most of the time.

The maintenance of this building will be very economical because all the plumbing and heating facilities are tied into one room in more or less open fashion. The workroom is too crowded. There is not enough space in that little area for the librarian and materials used.

St. John Library

The St. John Library is, of course, a prototype of the Cedar Lake Library, and I have no question about the similarity in plan of the two library sites. They are far enough apart so that it will not detract from the appearance of one building to have another one like it some place else.

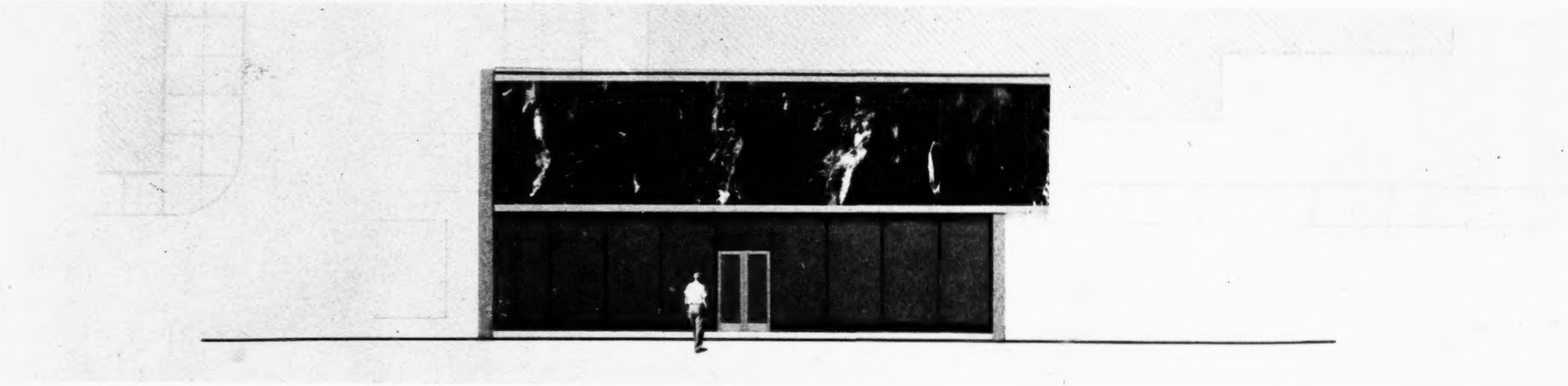
With the St. John Library floor plan the parking might be pulled around to the north side and still have access to the entrances. The entrance on the east side also might be pulled around to the north side, and that would eliminate some of the problems.

There is a tremendous difficulty here for northbound patrons. Coming from the south, they are completely cut off by a tremendous flow of traffic. To make a left-hand turn here would be dangerous, and pedestrians would not dare cross the street.

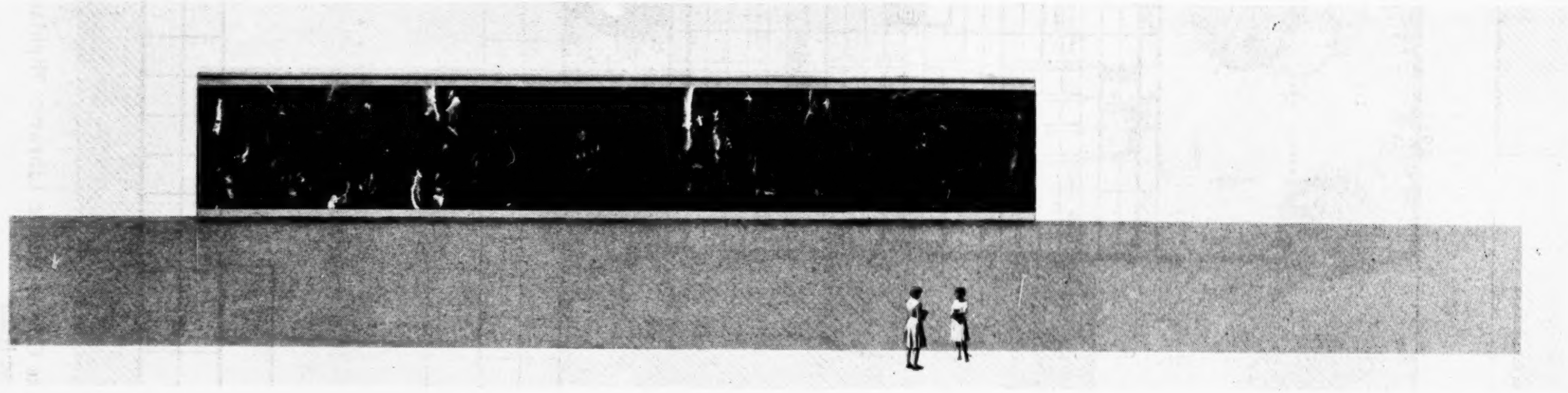
Highland Library

It would be a great mistake to use the old Highland Library. A library, in our estimation, is a vital structure that is used by the people. It is not a monument. It is something for everyday life. It is the real reason for our existence; we as librarians are useful to people.

With the two-story plan at Highland, the personnel costs in the next ten or twenty years will be higher than the cost of an additional lot in another



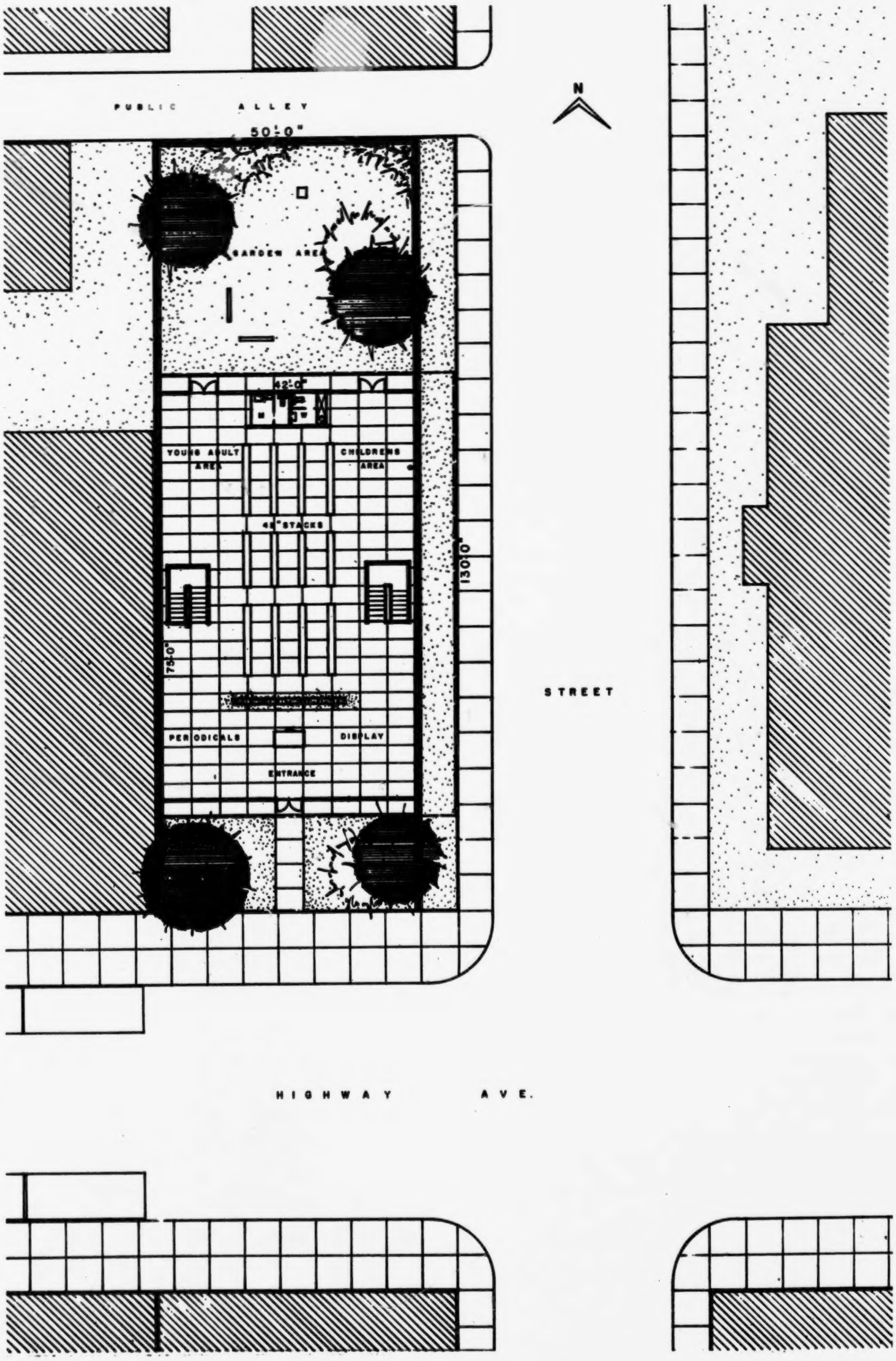
South Elevation



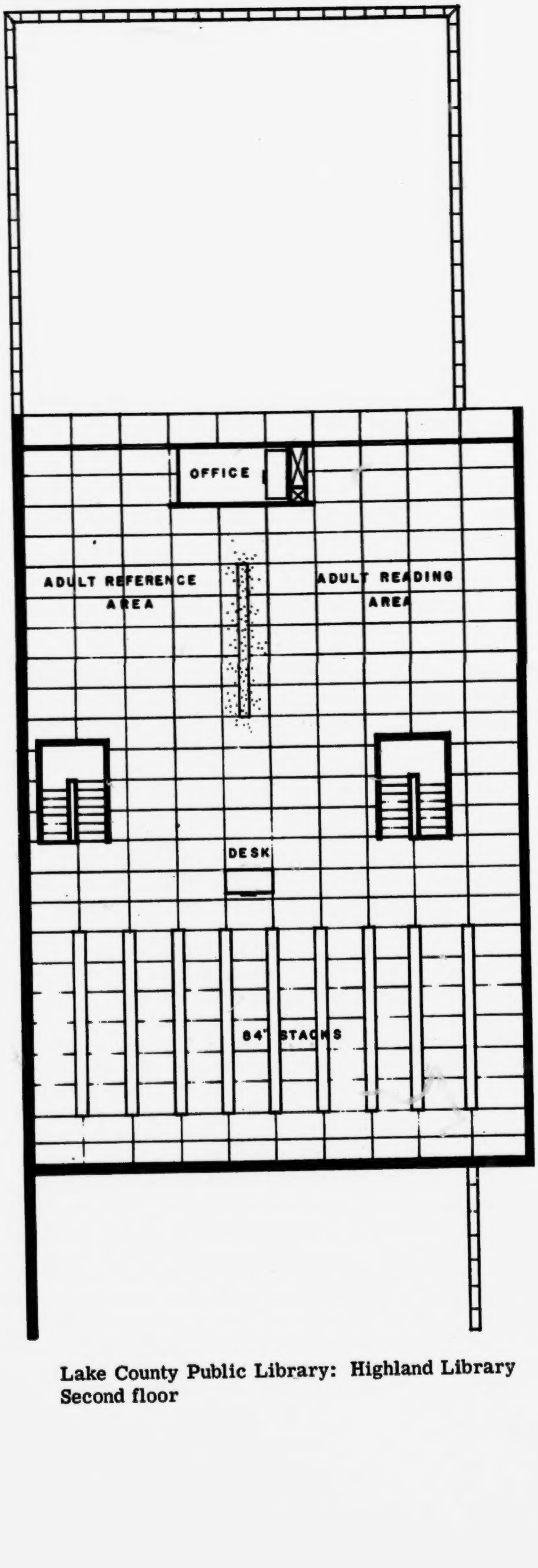
Coleman & Coleman, Architects

East Elevation

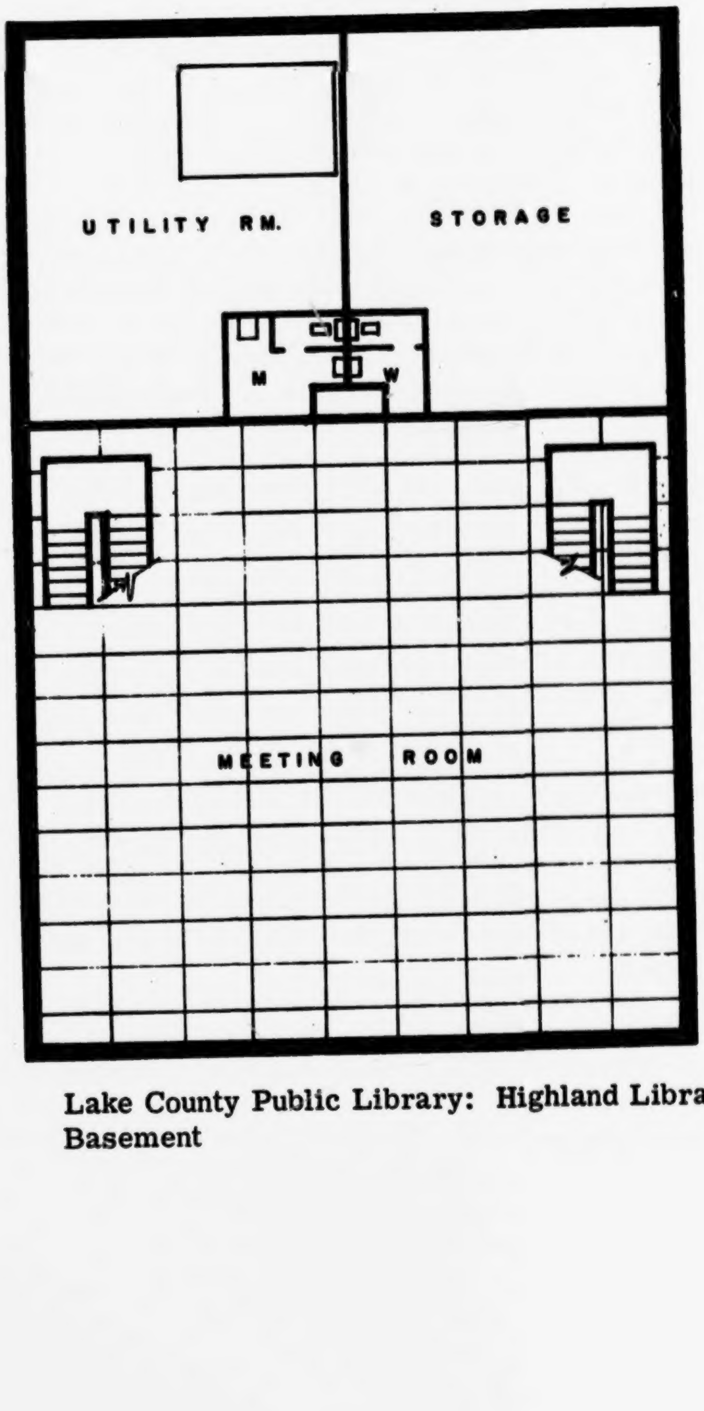
Lake County Public Library: Highland Library
South and east elevations


PUBLIC ALLEY
50'-0"
N
GARDEN AREA
42'-0"
YOUNG ADULT AREA
CHILDRENS AREA
42" STACKS
130'-0"
75'-0"
PERIODICALS
DISPLAY
ENTRANCE
STREET
HIGHWAY AVE.

Lake County Public Library: Highland Library
First floor


OFFICE
ADULT REFERENCE AREA
ADULT READING AREA
DESK
84" STACKS

Lake County Public Library: Highland Library
Second floor


UTILITY RM.
STORAGE
M
W
MEETING ROOM

Lake County Public Library: Highland Library
Basement

favorable location. If you are going to maintain two stories, it means that you will have to double your personnel at a time when you may not need so much. And how are you going to maintain that second floor without personnel?

Also, we have to consider the stairways. For young people they are no problem. But, we have many elderly and lame people who visit our libraries, and stairways do pose a problem to them. In addition, the two stairways constrict the building in the middle, making it seem like a very confined area. Finally, it is a mistake to locate the rest rooms in the same area with the children's department.

MRS. SUSANNA ALEXANDER

I still question the prototype library, and I have not been convinced by either Mr. Shore or Mr. Coleman that this is going to meet the needs of the individual communities.

Mr. Coleman mentioned that they are building these for a small staff library, but that they anticipate growth and will allow additional staff. I cannot see where the additional staff is going. There is not reader space to sacrifice for them.

I question cutting off the children's area for a community room. I cannot agree with the thinking that the children's room should be shut off at any time that the library is open, particularly in this situation where you have families coming into the library.

The site of the St. John Library is not entirely satisfactory. I understand there is some commercial business across the highway, where people will be going to park and trade. If the library were on that side of the highway, you could draw these people. Where the site is now located, there is little possibility for commercial buildings. There already is a school located there, and it is being developed for a residential area.

WILLIAM SHORE

The bulk of the books in the children's room are outside of the dividing wall so that, if necessary, the children's tables and chairs could very easily be placed outside the wall.

These are not prototype libraries. The prototype was used to describe the interior traffic flow, and the traffic flow was different in Highland than it was in Cedar Lake or St. John. Also, the architectural façades in Cedar Lake and St. John are different. It is the interior design that has been taken as prototype simply for the work flow and circulation of books.

As far as staff seating goes, two people are using double desks with quite sufficient space for both. If an additional desk in this area became necessary, it would be at the control point. You may have a readers' adviser desk in your adult or young adult area, and there is sufficient space for the material necessary for counsel.

DISCUSSION

Question: If the entire lot size were used, would the building be about the same square footage as on two levels?

MR. SHORE: Using the entire lot, you would get only 4,200 square feet, which is not sufficient. By utilizing a complete basement, or a basement the same size as the second floor, you get about 8,500 square feet. Thus, you have to either build a two-story building on this lot, or find a different location where a single-story library could be built.

Comment: You could tear down the old building and get the square footage you suggest.

MISS FLANDERS: In the Highland branch you have no windows on the street.

MR. COLEMAN: Nobody goes by on that side, so to speak; the side where everybody goes by is open. It is complete glass from wall to wall, and ground to ceiling, so that you can see through the building.

Question: What provision is made for anybody wanting to do research in these libraries?

MR. SHORE: These libraries, at the present time, are not designed as research libraries. Since we started about four years ago with practically no books, it has taken us four years to build simply the standard collections in each of these com munities. However, we can bring the books together. The reference coordinator can make fairly detailed bibliographies for the individual. Books we do not have can be obtained on interlibrary loan. We do not have, and probably will not for five or six years, a complete index reference service. At the end of this period, the area in Merrillville will contain the reference collection, the encyclopedias, and reference books.

MR. COLEMAN: We, as architects, feel that the best we can do is to keep the libraries as flexible as possible so that they can change their interior arrangement to conform to these particular needs.

Question: The Cedar Lake plan seems to have two basic errors. First, the children's area is so remote. Secondly, the receiving area is such a distance from the control room. I wonder if you can tell us why you decided on these particular locations?

MR. COLEMAN: The alley runs along that side of the building, and it was our thought that the delivery vehicles could stop for a period of five or ten minutes and create no disturbance in the library. Also, the librarian would normally know approximately when the truck was going to be there, and she could, when she had time, bring the materials out and work on them. The delivery room is more or less a depository during this interim.

MR. SHORE: There is no workroom in the library because there is no work accomplished in the normal sense. The librarian receives books and recordings, and shelves them. There is a storage area, where books may be placed on receipt, and the books she is sending out may also be placed there on an outgoing shelf.

Question: Since the Highland building is 1,600 square feet, why is it not possible to use the side street as your main entrance, with one half of the building being juvenile circulation and the other adult, with your desk in the center? This would create a building that is much more flexible.

MR. COLEMAN: In the one-story scheme we have changed the entrance to the side. But this street dead-ends 200 or 250 feet beyond the library, and there is practically no traffic whatsoever.

Comment: If you take the space at the front of the building where the two trees are shown, and the space at the rear where a couple more trees are shown, and remove one of the stairways, you would have almost as much room on the main floor—even if it did not expand to the west—as you now have on the floor and a half.

MR. COLEMAN: It happens to be a mandatory law in Indiana that you must have two exits for any public area. We cannot eliminate the stairway.

Comment: One of the things that has impressed me in the group of studies here is that the planners have attempted to create an environment in a library which I am sure, in many instances, does not exist in the community. A two-story development might ensure some resultant benefit to the users with this creation of a favorable environment.

Ogden Public Library

Ogden, Utah

STATISTICAL DATA

Architect: John L. Piers, Ogden, Utah
Type of library: Main public library
Population to be served: 110,000
Area: 44,600 square feet
Book capacity: 200,000 volumes
Seating capacity: 350
Cost:
Equipment: $150,000 (estimated)
Building: $892,000 (estimated)
Site: $18,000 (demolition, estimated)
Cost per square foot: $20 (estimated)

PRESENTATION OF PLANS

Librarian: Maurice Marchant
Architect: John L. Piers
Critic: Hoyt R. Galvin, Librarian, Public Library of Charlotte and Mecklenburg County, Charlotte, North Carolina

MAURICE MARCHANT

Ogden, Utah, traditionally is a railroad junction of national importance. It has some local industry, primarily food preparation. During World War II, several military installations were organized in its environs, which have grown with the years. Recently rocket and guided missile plants have come into the locality. Population is expected to grow in Weber County from its present 110,000 to 200,000 by 1980. It is strongly urbanized with a fringe of agricultural pursuits around it.

Most of the people live within about a fifteen-minute driving distance from downtown Ogden. Our present library service consists primarily of a Carnegie Library that was built in 1901 when Ogden had a population of 16,000. We now have 163,000 volumes. In addition, we have one small branch with 100,000 volumes. The circulation in the county area outside Ogden is served by a bookmobile in conjunction with the state library.

When we started to plan for a new library, we considered the importance of locating a new site. We found that 60 percent of our activities combined library stops with other activities, such as shopping or work, and that 75 percent of the people came to the library by automobile. We determined from this that we needed a good downtown site with adequate adjacent parking.

Our survey pointed out that our present library site was a good one. It is one block from the city's busiest corner. It is on the main downtown thoroughfare with a municipal parking lot behind for about 144 cars. The area of our site is rather small, however, for the building we are contemplating, and it dictated the design of a multistory structure.

There are other libraries in the area which affected our decision as to what kind of a library we wanted. We have State College in Ogden, which is just developing a 300,000-volume library. The Salt Lake City Public Library is building a new library only thirty miles away. The University of Utah Library is expanding a $6,000,000 building in Salt Lake City, and the Latter Day Saints Church there has a very large genealogical library. We wanted our main library to be a strong reference service, however, with eventual expansion of circulation to small neighborhood branches.

An analysis of the past several years' experience in the library indicated that to develop a library which would maintain its use for a period of twenty years, we should make room for 200,000 volumes, 350 seats, and 700,000 circulation. Our emphasis in developing this library is economy of operation and economy of maintenance.

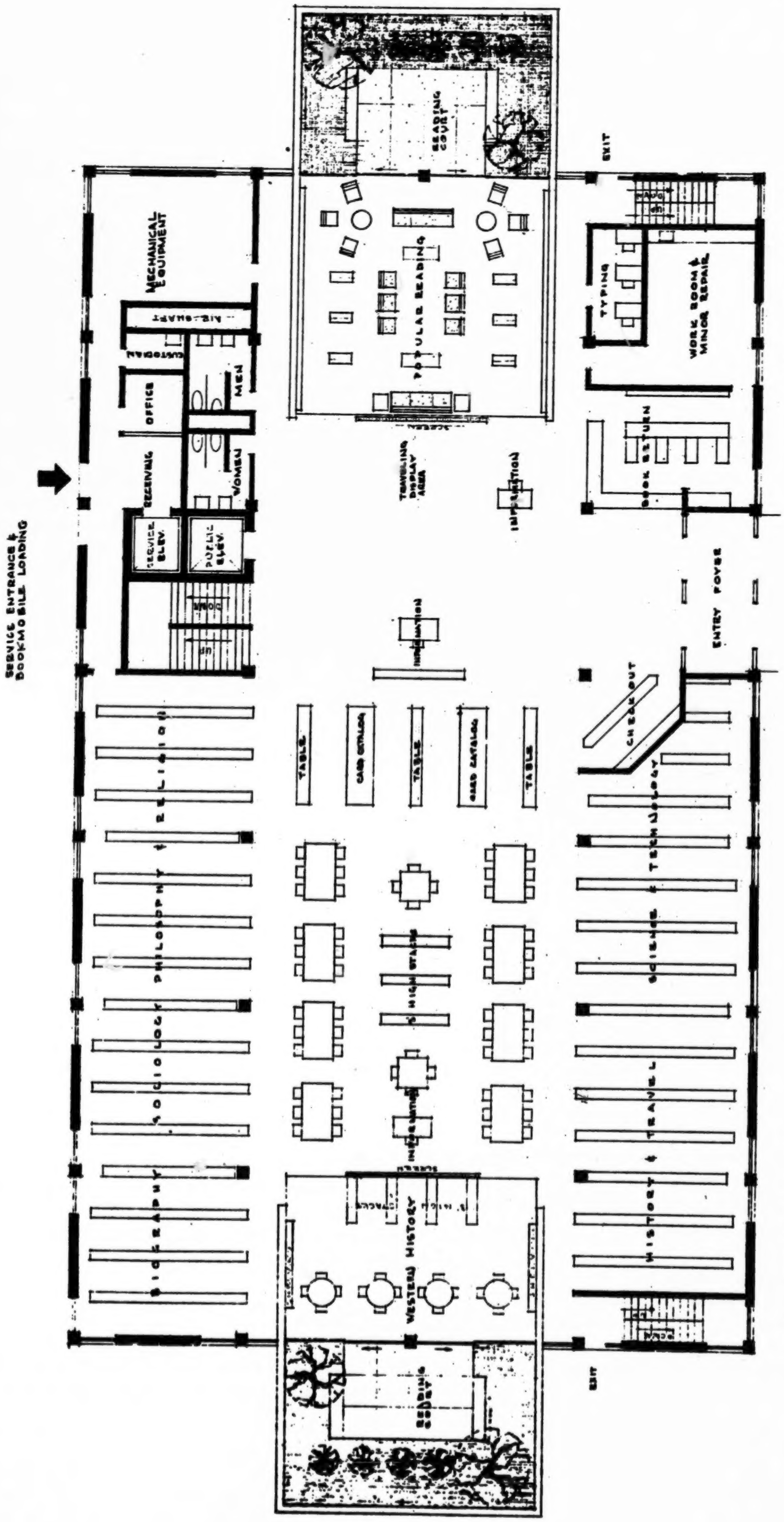
Open stacks

We wanted open stacks largely to provide for good visual control by a minimum staff in the reading areas. We did not wish to duplicate the card catalog for the main adult collection, which meant that as much of the adult book collection as possible should be on the main floor. This dictated to us the removal of both the periodicals department and the juvenile department from the main floor.

Our charging of all books will be centralized on one desk to provide a strong exit control. There will be no film library, and we will not provide an auditorium, just one meeting room for about 50 people. This will not unduly affect the community inasmuch as there are several auditoriums around the city that are available.

One of our prime problems has been the transition of readers from the juvenile level to the adult level; we lose quite a few readers between those departments. We want to provide a stronger transition by developing a good young adult department which will be physically close to the children's department, but connected to and supervised from the adult services department.

It was important, we felt, to have the literature, arts, music, and recordings collections fairly close to the young adult. If we cannot accommodate the public service on two floors, perhaps periodicals should be the one facility to be moved off the two floors, because its use is strongly school-oriented. Our information desk is integrated with a fairly small reference of about 300 books and supervision of the card catalog.


SERVICE ENTRANCE & BOOKMOBILE LOADING
READING COURT
EXIT
MECHANICAL EQUIPMENT
CUSTODIAN
OFFICE
RECEIVING
MEN
WOMEN
SERVICE ELEV.
PUBLIC ELEV.
DOWN
UP
POPULAR READING
SCREEN
TRAVELING DISPLAY AREA
INFORMATION
TYPING
WORK ROOM & MINOR REPAIR
BOOK RETURN
ENTRY FOYER
CHECK OUT
TABLE
CARD CATALOG
PHILOSOPHY & RELIGION
SOCIOLOGY
BIOGRAPHY
SCIENCE & TECHNOLOGY
HISTORY & TRAVEL
WESTERN HISTORY
READING COURT
EXIT

John L. Piers, *Architect*

Ogden Public Library
Main floor

JOHN L. PIERS

The site of the library is on an existing civic center site. One block north of this site is the heart of the business district. Washington Boulevard is the main street in town, and the side street, 26th Street, is also a busy thoroughfare. The site has a strong relationship with the downtown area, it is very closely identified with the old building, and the library owns the site.

The small size, however, dictated a multistory building. A one-story plan would extend over the walks. Also, the present parking is very poor because it is in the back of the building. One of our basic criteria was to get a building that would be very flexible from an interior arrangement point of view. We developed square modules of 22 feet 6 inches. The columns are 22 feet 6 inches, but we have opened up the middle bay 45 feet.

The board wanted strong control in this building; it desired both a physical control for checking the books in and out and a visual control from the information area in the center of the building. That was one of the reasons we left the columns out of the middle.

The other criterion was that the library should be about 95 percent open stacks in the reading area. With our budget, this necessitated 7-foot stacks around the periphery of the building with all the people in the center.

On the main floor we have the entrance area and the information and reference center. The adult collection is primarily on the main floor, but does not include the 700 and 800 series and the popular reading area—a duplicate volume area. The reading court, next to the popular reading area, is closed off but not covered. On the other end is a Western History area that encloses the local history collection and rare books.

On the upper floor is the children's area. One of the criteria was to close this children's area off at certain times, primarily at night, while other parts of the library were still open. Also, music, literature, art, and fiction are on this floor as well as utility areas: toilets, mechanical room, elevators, and stairs.

Lower level

On the lower level are the periodicals and newspapers. The stacks at the left are for the bookmobile. While the bookmobile is not stored at the library, we are still going to have to charge it from the central library.

The offices are downstairs since we wanted to provide as much adult service on the main floor as we could. There are a number of enclosed areas in the basement which may later be opened up. The stairway and the elevator walls, of course, are constant.

The outside appearance of the building is rather bulky, but we have a massing problem with the building next door. We do not want tremendously large glass areas since we feel this is quite a mistake, even with low-transmission glass. We have introduced a break panel between the glass areas that relates in color back to the building and the cast concrete panel above.

HOYT R. GALVIN

The statement that this is a small site is merely a point of view. There are from 33,000 square feet to 34,000 square feet on this site. I could argue that this is a big site. The building, roughly, is 44,000 square feet. With three levels, you might call it a total of 44,000 square feet on a site of 33,000 square feet.

If you apply that to today's population, that is about .4 square feet per capita. Then, if you project it to the population of 200,000 that is expected in twenty years, it drops down to .22 square feet per capita. So we cannot debate the size of the building except to say that maybe it is small, and that the planners should think seriously about how they are going to expand it.

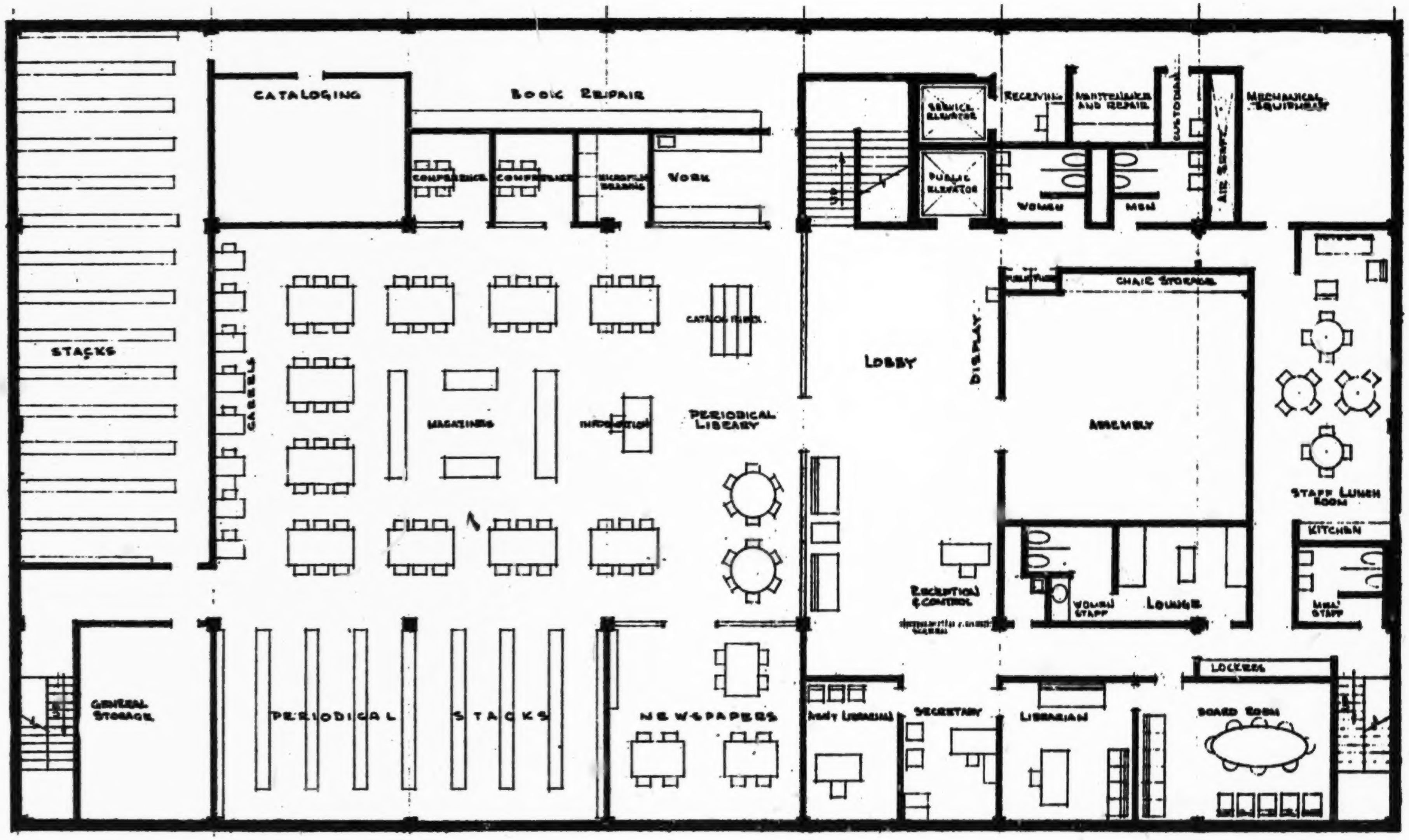
Mr. Marchant referred to economy of operation, yet the building may be even more expensive to operate than necessary on this 33,000-square-foot site The building is set back 40 feet from a 20-foot sidewalk. If you used all of the site, which I suppose would be running a good thing in the ground, you would get a 66,000-square-foot building on ground level and one level above.

One thing I learned was that excavating in this area is not too satisfactory. The builders expect the water table to be rather high, and frankly admit that this lower level may create a good many problems. It is suspected that the square footage on the lower level might be even more expensive than the square footage on the ground level or the upper level.

Mr. Marchant, being approximately thirty miles north on a freeway from some 1,200,000 books in Salt Lake City libraries, is justified in considering a smaller book collection than some of us would need in communities of similar size. Not enough serious work has been done on furniture, equipment, and layout. For example, should the periodical materials in the basement be separated from other reference materials? I recognize the problem of this large city-county building next door, yet you must first create a functioning library, and then do the best you can with beauty.

Possibility of rear entrance

With the 144-car parking lot in the back, I visualized myself parking my car there and getting out to go into the library. I immediately began to get angry


STACKS
CATALOGING
BOOK REPAIR
CONFERENCE
CONFERENCE
MICROFILM READING
WORK
CARRELS
MAGAZINES
INFORMATION
CATALOG FILES
PERIODICAL LIBRARY
UP
SERVICE ELEVATOR
PUBLIC ELEVATOR
RECEIVING
MAINTENANCE AND REPAIR
CUSTODIAL
AIR SHAFT
MECHANICAL EQUIPMENT
WOMEN
MEN
LOBBY
DISPLAY
CHAIR STORAGE
ASSEMBLY
STAFF LUNCH ROOM
KITCHEN
MEN STAFF
RECEPTION & CONTROL
WOMEN STAFF
LOUNGE
LOCKERS
GENERAL STORAGE
PERIODICAL STACKS
NEWSPAPERS
ADULT LIBRARIAN
SECRETARY
LIBRARIAN
BOARD ROOM

Ogden Public Library
Lower floor

because I could not get in the back door. So I commend very earnestly the possibility of two entrances. They would make the control more difficult, but it is very important in this building, with 144-car parking in the rear, that patrons be able to enter at the back of the building as well as in the front.

There are two charging desks. The desk on the right is the check-in desk, and the one on the left is the check-out desk. I am concerned about the duplication of clerks on those desks in the slow hours. Mr. Marchant has the idea to have a sign at times on one of them, "Closed for now," but it would be better to put both operations on one desk.

There is a problem with the subject arrangement. First, this is not a large enough community, in my philosophy of library administration, to have a subject-departmentalized library. Secondly, in this particular plan, Mr. Dewey's classification scheme gets a little confused in the collection. The average person who comes to the library is somewhat hesitant and does not like to ask for help. He likes to show how good he is at finding books. He looks at the card catalog and finds .016, but I think he will have trouble locating the number the way the book collection is arranged.

Also, I am concerned about the reference work area. Maybe Mr. Marchant has some reference librarians that are not disorderly. If they are really going to get work done, they will probably have to have a place where they can be disorderly. You should have a room for pamphlets, and that is not clear to me as the building now stands. There is a little bookmobile office, but there is no place to put books except way off down in the lower level. The popular reading room is another place where the layout needs serious study, because this is a large room and yet it does not seat enough people. Some of the information stations could be combined.

The hall is a delightful architectural feature which brings the pierced brick wall in through the building, but it leads to lost footage. For example, one does not need to go to the mechanical room through the hallway since there is another entrance. Public lockers could be put in this hallway. Also the entrance area, where people come in the door and decide where they want to go, does take some space, but this might be too much space.

Mr. Marchant has visions—and I emphasize visions—of getting groups of children who come in to the library to march dutifully down the hall and up the stairway next to the exit. I think the other stairs, next to the elevator, and the elevator itself are going to be an attraction to them.

Story hour room

The story hour room, about 4,000 square feet, seems extremely large. Yet the rest of the children's department, with the present shelving and furniture arrangement, does not store many books or seat many children. A serious furniture-layout problem is present there.

I wish there were a way to develop a story hour area without complete identification of that space. I had the delightful privilege, some three years ago, of being with a team of fifteen American librarians who visited Swedish librarians for ten days. We saw some unique arrangements with story hour rooms. Sometimes the library would simply have a drapery from the ceiling that could be pulled in a kidney shape, and there would be a story hour room. The drapery was an imaginative touch, and the room could still be used for other purposes during the day.

The projecting cantilevered sections of the second floor create both problems and opportunities. The plans show bookshelving. There could be some individual study tables in here, if there were reasonably good control and no need to worry too much about the distance. Shelves in these sections will be a constant problem, for they will become shelves of lost books.

On the lower floor, the office area seems to be satisfactory. If an assistant librarian is hired some day, space could be provided for an additional office without losing flexibility. The glass wall should be removed, as a double-space bookshelf will serve the same purpose; the wall makes the building more expensive.

The service elevator is a long way from the storage room, and conceivably many things in storage will be hauled down in this elevator. The cataloging room seems quite small.

The microfilm presently is limited to newspapers. In time the library may have other types of microfilm, and the small microfilm area may then become a conference room. The microfilm readers would then be scattered around the building.

The assembly hall, Mr. Marchant says, seats 50 people. According to my calculations, it would seat 75. The ledge here is nice since it permits exhibits and displays as an educational adjunct to a meeting taking place. The staff room seems quite satisfactory. Only one area is indicated for lockers, which seems quite small. There might be a smaller locker area in the work spaces adjacent to the librarians.

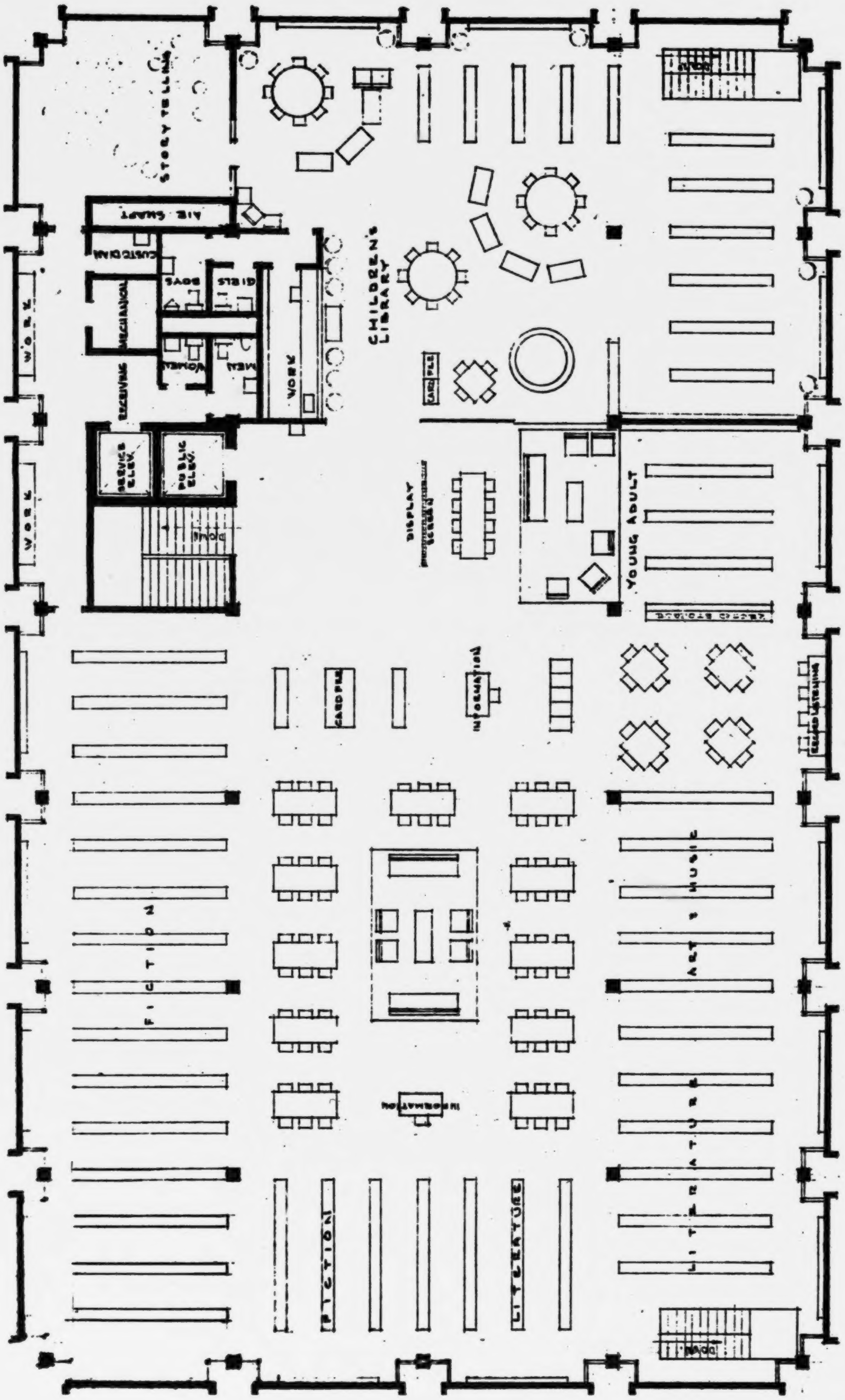
DISCUSSION

Question: Is there a library consultant engaged for the interior layout?

MR. MARCHANT: No, and we do not feel that our interior layout is anywhere near completed.

Comment: With this furniture layout, the "love nests" are too many. When you have an area with information centers, you should be able to see the stacks.

Question: I would like to question Mr. Piers about


STORY TELLING
AIR SHAFT
CUSTODIAN
BOYS
GIRLS
MECHANICAL
WOMEN
MEN
WORK
WORK
WORK
RECEIVING
CHILDREN'S LIBRARY
CARD FILE
SERVICE ELEV.
PUBLIC ELEV.
DOWN
DOWN
DOWN
DISPLAY SCREEN
YOUNG ADULT
RECORD STORAGE
CARD FILE
INFORMATION
RECORD LISTENING
FICTION
ART & MUSIC
INFORMATION
FICTION
LITERATURE
LITERATURE

Ogden Public Library
Upper floor

the concrete panels. Isn't there some material that is as cheap yet wouldn't look ugly and mottled and worn so fast?

MR. PIERS: This is a precast concrete panel that would probably be a marble aggregate. We have found this one of the most successful building materials in the intermountain country for durability, permanence, and effectiveness. It has been used quite extensively. The big problem with any concrete is to get it properly dripped so that water will not drop down on the face of it.

Question: If you eventually take over the control of the bookmobiles, are you looking to the future in having these stacks so far away from your only service entrance? The space you are using for the cataloging and the microfilm reading room is approximately the same as the space you are using for your stack area of bookmobile.

MR. MARCHANT: We had thought, at one time, of putting the storage area on the main floor. We would like to have everything on the main floor, but there is not room. We thought we could put the storage down, and run a book truck up once a day when putting materials on the bookmobile.

Comment: First of all, I would take issue with your total square footage on this site. It is 30,000, not 34,000, according to my mathematics. I envy this library having available 30,000 square feet for this building, but the builders are going to utilize only 18,000 square feet.

It would be very wise to eliminate your 40-foot setback and bring your building to the sidewalk. You have the possibility then of using display windows in between the windows that provide your lights. If your building is located in the downtown area, you should have display windows and the exterior should be very attractive. The typing room could have typewriters, coin-operated or rented.

Question: My question is in relation to flow of materials, primarily in terms of the book return area. There is only a public service elevator, and the regular service elevator in the back. With a potential of 750,000 circulation, how are you going to get materials up and down easily?

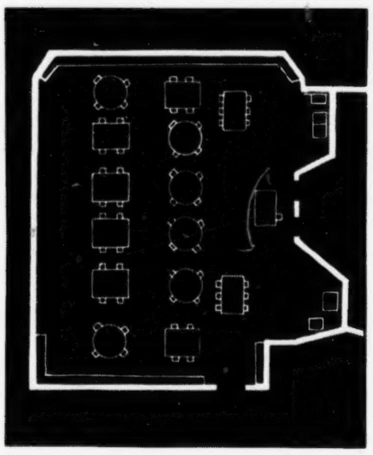
MR. MARCHANT: It *is* a way around to the service area. The materials will go either there or up to the public area. We will probably resolve the problem by using the public elevator in the morning before we open up to the public.

Question: When the building is open, you are going to be in a situation for some time where you will not be able to service all of these desks. What arrangements are you making to handle problems that you obviously anticipate in designing the building, but that you will not be able to cope with at the beginning?

MR. MARCHANT: There are a number of reasons for the way the building is oriented. One person on the main floor can see the entire seating area in both directions.

Comment: I subscribe to your having most of your important public functions on the main floor. I note that you have a Western History room here. Would it not be better to move this local history section upstairs? A higher priority might be put on that closed space than using it for a local history collection.

Comment: People do not seem to read outside. If it is warm, they go inside an air-conditioned building. If it is cold, they go in where it is heated. I think the reading court is a nice architectural gimmick, but I recommend you use your money otherwise. Also, I am concerned about the two elevators, wondering whether one, combining service and passenger elevator, would be better. Then the other one could be used to take books floor by floor and could be located over by your service entrance desk.



School Libraries

THE SCHOOL LIBRARY AND THE ARCHITECT

The Architect

CHARLES J. BENDA, JR.
Consultant, Architectural Planning
State Department of Education
Tallahassee, Florida

Education is a lifelong process. One objective of the school program is to teach the student the skills for self-education after he leaves school. The school library, or instructional materials center, represents perhaps the most important single area of the school program in teaching the process of self-education.

The objectives of this library space, as an architect should know, are to: (1) support the instructional program; (2) provide materials for personal needs; (3) provide for reference service and research; (4) serve the entire school; (5) provide needed services to implement the educational program; (6) serve the teachers as needs demand in preparation of subject matter and student motivation; (7) provide adequate materials, facilities, and services to meet the needs; (8) provide an atmosphere to encourage pupil participation and search for information and knowledge on their initiative; and (9) produce an atmosphere conducive to recreational reading.

The architect should be aware of the program and activities if he is to produce a dynamic plan. This knowledge should include, and be based on, the librarian's philosophy of prelibrary use, the elementary program, and the secondary program.

The architect should know how the library is employed by individual pupils for research assignments and recreational reading. He should know space needs for teachers and any planned community use. For example, many of our junior colleges serve an area that sometimes includes students from surrounding counties who commute each day. A school library, open for use by the junior college student near his home, would, if suitably planned, be of immeasurable value to the student and community.

The librarians' use of this facility I will bypass—it is known better to you. To acquaint the architect with your needs invite him to observe a working library facility of your choosing. He might, by observation of patterns and movement of all occupants in this special space, provide suggestions and flow patterns to improve the circulation.

Specific requirements

Specific requirements that an architect should be furnished may be listed as follows:

1. Stacks to provide for a specified number of volumes. Shelves adjustable to accommodate oversize books. Stack heights up to 6 feet high along walls and 4 feet high when used as space dividers.
2. Rack space for magazines (slanted-type shelving) for the number of issues currently received, and planned to include some growth in subscription. Rack space for newspapers designed for economical storage.
3. Storage for present recordings and a reasonable amount of growth, tape recordings in a cabinet, and filmstrips in a cabinet provided with drawer storage—to be added to as the collection grows.
4. Tables and chairs for the required percentage of users in the reading area, with not over 6 pupils per table. Table height to fit the user. (You may wish to recommend that one third of the tables be round or other than rectangular.)

5. Study carrels (based on the number required by your program). The carrels to be individual or in multiples, with partitions for privacy and a shelf for materials. Proper lighting and an electric outlet to be provided each carrel.
6. Informal seating in the browsing area to be homelike and invite participation and use.
7. Circulation desk to be placed at a focal point for good supervision. The design could be counter height, movable or sectional, perhaps of a circular shape, with a book return drop slot, built-in charging facilities with card files for books in circulation, and lockable money drawer. Storage shelves and drawers as needed.
8. Card catalog in five-drawer units. These units may be stacked as recommended, or set side by side with a countertop over them to serve for a ready reference work surface.
9. Four-drawer vertical files to be placed where best to provide the function they will serve.
10. A dictionary stand and an atlas stand located for best use.

Workroom

In the workroom careful planning is most important. Sequence and flow patterns should be fully understood by the architect. You could compare the efficiency of this room with the efficiency that you expect of your kitchen. I mean by that the ease of sequence of receiving and storage, to preparation, to serving, and back to storage. This is a simple flow pattern.

The equipment will include a work counter. The work counter should be 3 feet high and 30 inches deep; the length may vary due to the design of the workroom. It should be provided with a sink and running water. The physical design of the counter should include a kneehole space beneath the middle one third of the counter wide enough for two people to sit and work comfortably. There should be open shelves above, drawers for supplies at one end, and a closed cabinet under the sink. The countertop and splash should be finished with a surface that is easily cleaned and water resistant. A space should be provided for lacquer spraying and—as an added luxury—an exhaust fan over the area to remove the fumes. The equipment should be positioned in the workroom to permit ready supervision from the reading area.

There should be provision for shelving of current magazines and newspapers, and shelving for at least two years of back issues of periodicals.

Storage facilities for audio-visual equipment should take into consideration the size of the equipment and the frequency of use. The architect needs information on motion-picture projectors, filmstrip projectors, tape recorders, record players, opaque projectors, overhead projectors, screens with projection stands, globes, roller-type maps, and posters. With this information he can best use his talents properly to store materials and provide ease of access.

The conference space should be large enough to have a table and chairs for the number of occupants you desire. The room should have some shelving space.

Other space needs

Space may be needed for film preview with a permanent small screen. This space could be provided in the audio-visual storage room. Several viewers could serve adequately for previewing. Listening stations for tapes and recordings, if desired, should be planned for.

If the library is to be separate from the school building, rest room facilities for library staff are a vital consideration. A custodial storage area should be an important part of the planning. Only through continuous maintenance can your library be maintained in its new condition. The only other item would be wardrobe space for your convenience and staff use.

The environment of the library facility encompasses all factors that lend themselves to your comfort and pleasure. The environment is controlled by air conditioning and heating. Acoustics become an important consideration for sound abatement or absorption. Carpeting or floor treatments are necessary for absorbing and relieving the normal noise of moving chairs and scuffling feet. Consideration should also include walls and ceilings. The colors, another phase of environment, should be attractive and restful. Lighting is a factor that has been reasonably understood, and for this architects refer to the Illuminating Engineering Society Standards and good practice principles.

Well-planned utilities are always a prerequisite to an adequate facility. A display by use of a chalkboard in the area of the circulation desk and a bulletin board in the entrance area would complete a library.

All this information can be furnished the architect by including it in a well-prepared document of educational specifications which tells him in a language he understands your desires and needs. Good design and the pleasure gained in the use of a well-executed building can only happen when the entire process is a cooperative effort.

The School Library Program: What the Architect Needs To Know

JOHN L. CAMERON
Chief, School Housing Section
U.S. Office of Education[1]

In order to have a more complete understanding of the librarian's role in the planning of new or remodeled school facilities, I believe it will be well to outline briefly the most important steps leading up to the actual planning of a library in a particular school building.

Every building project, whether it is to be a new facility or a renovation, should be part of a long-range program adopted by the board of education. Long-range programs should evolve from school surveys. W. L. Lathan, a former associate of mine in North Carolina, once said, "I have become convinced that the time to have a survey is when you think you don't need one." His statement illustrates the importance of having a definite plan prepared before you are confronted with the necessity of taking action.

Surveys will include status and predicted trend studies of (1) the economic and sociological structures of the community, (2) the population, including age groupings and migration, (3) transportation, (4) zoning, (5) geographical characteristics, (6) the curriculum, (7) personnel, and (8) finance. Out of the surveys will come recommendations on such factors as organization of the schools, including schools that should be eliminated and new ones that should be constructed; at least general areas in which school sites should be purchased; the facilities that should be included in each school; a plan for financing the building programs; and a plan for phasing out the program in terms of the resources of the community and in accord with the needs as they will occur. In many cases the resources of a community do not permit the realization of all facilities when they are needed. Therefore, the recommendations may include a suggested order of priority of projects.

In developing the long-range plan it is important that consultations be held with many nonschool agencies, associations, firms, and individuals. I shall mention only a few: city or county planners, highway and street departments, recreation and parks departments, urban renewal authorities, and private builders of residential properties. After a long-range plan has been adopted, it is important that it be reviewed periodically, and modifications made to take into account changes in conditions which were not foreseen in the original planning. Gerald Horton Bath has said: "History is like a surveyor's transit. Unless we use it frequently to look back and get our bearing, it will not be of much help to us in running a straight line ahead."

My treatment of the over-all educational planning has been very superficial; however, we must move along and will assume, therefore, at this point that the over-all planning has been completed and a long-range plan adopted by the board of education. We will concern ourselves now with one new school which the long-range plan reveals will soon be needed. We shall assume that the site has been purchased, funds made available, and an architect selected.

Quality of education

All of us are familiar with the expression, "A house does not make a home." It is equally true that, "A schoolhouse does not make a school." The principal function of a school plant is not only to accommodate the school program, but also to facilitate the teaching-learning processes. If it fails in this function, the quality of education may be seriously impaired and the cost of instruction increased.

John Lyon Reid, noted San Francisco architect, has very aptly stated, "Education is fluid; as such it tends to take the shape of its container." Many of you undoubtedly are familiar with examples in which school buildings have, to a large extent, dictated school programs. A striking example is found in the development during the early part of this century of the junior high school. The most impelling force in the establishment of junior high schools in this country grew out of a building problem—the necessity of relieving overcrowded schools, particularly secondary schools.

The need for a new school building should be based upon the purposes which the school is to serve; from purposes the school program evolves. The educational specifications are developed to interpret the requirements of the school program to the architect in such a way that the completed facility will serve its function.

The determination of the need for an educational facility is based upon the many purposes which the school is to serve. If this were not true, we could not justify the annual expenditure on public elementary and secondary schools of more than $19 billion, of which approximately 25 percent is for capital outlay.

The purposes of a school should be based upon what the community should do, and is willing and able to do, in the way of educating its people. Please notice I did not say that the purposes should be based upon community needs. The day is past when we can plan to educate our youth with the expectation that they will remain in the community. The average American family now moves once every five years. Younger families move on an average of every two-and-one-half years. Included in our purposes should be that of preparing each student to his fullest potential of being a useful and gainful citizen, regardless of where he may live.

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[1] In his prefatory remarks Mr. Cameron observed that: "A member of my staff, J. L. Taylor, is presently developing a publication on *Library Facilities for Elementary and Secondary Schools.* Mary Helen Mahar and Richard Darling, from the Library Services Branch in the Office of Education, are serving as consultants."

Some of the purposes which a school may have will be common to all other schools. Others will be the same as for many other schools. There may be one or more purposes which only the single school serves.

School program

From the purposes which a school is to serve, the school program is developed. The answering of questions such as the following is basic in the development of the school program:

1. What educational levels (age or grade) are to be served?
2. How many pupils is the plant to accommodate? Now? Future?
3. What staff will be available?
4. What courses will be offered?
5. How many pupils might reasonably be expected to take each course?
6. How will the school be organized to carry on the course offerings?
7. What will be the "extra" or cocurricular activities in the school?
8. How will the school be organized to carry on the cocurricular activities?
9. What nonstudent activities will be available at the school to people in the community?
10. Will they be available during school hours or only during nonschool hours?

Educational specifications

When the program of the school has been determined, it is then the educators' job to interpret the program to the architect. This interpretation takes the form of educational specifications.

Most of us are familiar with the specifications which, along with the plans, constitute instructions and interpretations from the architect to the builder as to how the building shall be constructed. The specifications thus become a vital part of the contract for construction. Educational specifications are the instructions and interpretations from the duly authorized school officials to the architect as to the educational program the building is to accommodate. These educational specifications should become a vital part of the contract between the owner and the architect. The educational specifications furnished by the educator to the architect should convey, as clearly as words can convey, the program—both indoors and outdoors, during school hours and nonschool hours—that the completed facility is to accommodate; yes, and facilitate.

It is in the development and interpretation of the educational specifications that library supervisors and librarians can contribute most in the development of plans for a new school building. You must remember, however, that there are many other persons who are also concerned, and that the school superintendent, or his assistant in charge of school planning, has the responsibility of developing the educational specifications.

I firmly believe that a particular school facility should not be designed according to the specifications of any one person. This holds true for librarians as well as for teachers and others. There is no way of knowing how long an individual teacher or librarian will serve in the school after it is completed, or if his particular ideas and tastes will be suitable to his successor. I am not saying that many of the ideas of an individual cannot be incorporated into the new facility; this can readily be done if we incorporate a reasonable amount of flexibility in our plans.

It is my belief that the educational specifications for a biology laboratory should be developed by a committee of the most capable biology teachers and supervisors in the school system. The development of educational specifications for a library should, in like manner, be done by a committee of the most capable librarians in the school system.

The type of information on the library which will need to be included in the educational specifications can be summarized by the following question: What will be done in what way by how many persons from where and of what size and in what capacities at any given time, using what type and quantity of supplies, equipment, and materials? This means that the architect in planning a new library will need to know the answers to such basic questions as:

1. How many items of printed materials of different types will need to be in the library?
2. How many and what types of audio-visual aids will need to be included in the planning?
3. What are the most efficient ways for the materials and audio-visual aids to be utilized?
4. How much and what type of preparation of materials is contemplated?
5. Should the plans incorporate facilities for the maintenance and repair of books, films, and the like?
6. What controls governing the operation of the library are contemplated?
7. Will a professional library for teachers and other staff members be a part of the school library?
8. Will there be departmental libraries in addition to the main library?
9. Will books, films, projectors, and so on be regularly disbursed from the library to the classrooms?

10. Will conferences with individuals or groups be held in connection with the library program?
11. Is it contemplated that audio-visual aids will be utilized in the library? If so, by individuals? groups? what size groups?
12. What is the maximum number of books that might be expected to be checked out in one day? returned in one day?
13. What activities in connection with the library program will require special acoustical treatment? special lighting treatment?
14. How many and what type of materials will be displayed?
15. How many full- and part-time librarians will be available?
16. How many student assistants will be available, and what type of work will they perform?
17. What should be the capacity of the space devoted to each activity of the library at a given time?

The above questions are by no means all-inclusive. They do illustrate the types of information that should be conveyed to the architect through the school staff member in charge of the educational planning of the entire school.

If you are fortunate enough to be contemplating a new library in the next three or four years, begin now a study of your functions and needs. It will be time and money well spent to find out where there are libraries which are reputed to be serving their functions well and go visit them. Do not just look at the facilities, but study how well the library accommodates the activities of the different programs included.

It has been said that a good architect commissioned to design a home will often literally live with the family for several days before beginning his design, in order to learn firsthand the activities of the members of the family. He can use this knowledge only as a point of beginning, however, since the restrictions of the present residence may unduly influence the activities of the family. Many architects, before starting plans for a new school building, will spend a considerable amount of time in different parts of several schools in order that they may better understand the various activities.

In summary, I would like to repeat the following points:

1. The absence of adequate educational specifications could well mean that the completed library will dictate what the library program will be.
2. Educators should not attempt to be architects. Bill Caudill, Dean of the School of Architecture at Rice Institute and a noted school architect, once said to the American Association of School Administrators that AASA stands for "Association of Amateur School Architects." Likewise, architects should not attempt to be educators. AIA is the acronym for the American Institute of Architects. At times one could well say that it apparently stands for "Amateur Instruction Administrators." A limited amount of this interplay, however, is desirable.
3. Do not confuse educational specifications with building specifications. Do not tell the architect that you need 2 storage cabinets 2 feet 3-3/4 inches wide x 1 foot 10-7/8 inches deep x 5 feet 4 inches high. Tell him what and how much is to be stored, who is to use it, and how frequently. Utilize his training and experience by letting him figure out how provisions can best be made. Architects are human, however, and the educator should check to be sure that the necessary provisions *are* made in the plans and specifications.

Just as the compass has many points, the involved process of school planning has many facets. There will be many times when we will have difficulty in finding the answer to the principal problem with which we are concerned. However, by intelligently seeking and finding the answers to the many other problems involved in the process, we will invariably be able to find a just and equitable solution to the major problem—providing the opportunity for every child to "burgeon out that which is within him."

A New School Library Planned for a Program

BLANCHE JANECEK
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University of Chicago
Chicago, Illinois

In 1912, Dr. Charles Judd, Dean of the School of Education at the University of Chicago, first proposed to the American Library Association that a school library be established as a study center of a school. He defined this as an area filled with materials which young people could use in their studying.

Despite a lukewarm reception, the University High School Library was organized in 1913 as the first study center type of library in the country. The original purpose for the library has been retained and extended. It is now identified as one of the centers for learning at the University. It is a functional school library which effectively provides a program for teaching and learning. Provision is made for each student in the school[1] to have library periods daily. These may be either formally scheduled or unscheduled.

Many types of quality materials are provided. The materials currently include: approximately 17,000 hardback books; 6,000 paperbacks; 2,500 foreign-language books in French and German (and the library is beginning its collection of books in Latin and Russian); 550 recordings; 53 file drawers of pamphlets; a sizable collection of college catalogs and yearbooks; current subscriptions to 125 periodicals, and back issues from 1949 to the current date for about 85 titles; the *New York Times* from 1910 to the present date on microfilm; an extensive reference collection; and (next year) professional, flat-map, and art prints collections. Materials are organized to facilitate independent use by students. The high school library experience is an important preparation for future use of college and university libraries. Approximately 99 percent of the students will enter college. It is also an important contribution to the development of a library habit hopefully carried on into adult life.

Seating capacity

The library seats 152 students in the main reading room. There are 4 conference rooms, 3 being used for group work and 1 equipped with three typewriters for student use; 10 individual study carrels; 2 microfilm readers; 4 earphone record players; and a compact staff workroom and stacks area.

The number of students the librarian assists is somewhat similar to the number for which any teacher assumes responsibility. For 750 students in the school there are 6 full-time professional librarians, 1 skilled typist, 6 paid and 12 volunteer student assistants. The physical facilities, materials, and staff make it possible to plan the most important part of the library program—library instruction. There are three approaches in this program: (1) Each librarian assumes the responsibility for making the maximum use of every moment with each student. The librarians know most of the students over a five-year period. (2) An integrated library instructional program is offered through the social studies, English, and science classes at all levels. (3) A formal elective course in library research skills is given at a sophisticated level for seniors.

In 1955, preliminary plans were projected for a new high school building. The head librarian was fortunate to have been included in all of the library planning with the administrators, architects, and library equipment consultant. A number of individuals, including the librarian, were asked to state the philosophy underlying their particular curricular areas. This two-year process involved much discussion and terminated with space areas allocated to the classrooms, science laboratories, library, cafeteria, and teacher offices.

Space needs

During the next two years, 1957-59, the librarian had the opportunity of working with the architects to translate the philosophy into functional working spaces. The space was finalized at 152 feet x 64 feet at its longest and widest points, comprising a total of approximately 7,400 square feet, including the reading room, 4 conference rooms, 2 stack areas, an office, and workroom. There were many characteristics of the school which the librarian had to emphasize continually. Opportunities for students to work in the midst of many, to work together in small groups, and to isolate themselves for complete concentration were to be provided.

The greatest concern arose over the librarian's ideas pertaining to the conference rooms. Each was to be as soundproof as possible and with no glass wall for supervision. The librarian conceded to a small glass pane in the conference room door. The use of a room such as this should ensure a degree of privacy to the users.

Another characteristic of the school had to be taken into consideration. Since this gifted school population had become accustomed to easy accessibility and availability of many kinds of materials, one large room was preferable. Because of the size

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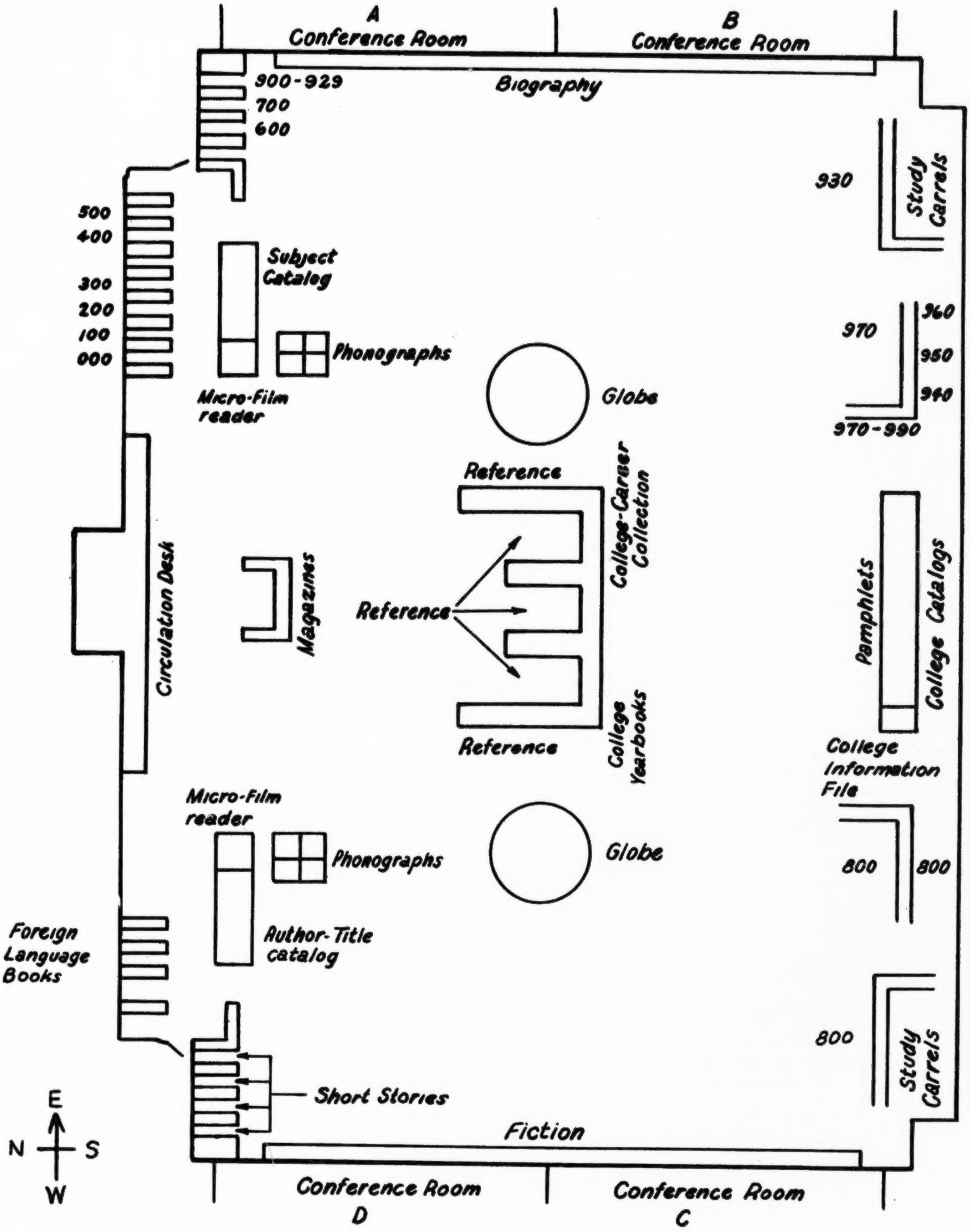
[1] The Laboratory School includes a combination of seventh and eighth graders (prefreshmen) through seniors. In age, students range from twelve to eighteen years old.


A
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900-929
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Biography
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Study Carrels
500
400
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000
Subject Catalog
Phonographs
Micro-Film reader
960
970
950
940
970-990
Globe
Reference
College-Career Collection
Circulation Desk
Magazines
Reference
Pamphlets
College Catalogs
Reference
College Yearbooks
College Information File
Micro-Film reader
Phonographs
Globe
800
800
Foreign Language Books
Author-Title catalog
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Study Carrels
Short Stories
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Fiction
Conference Room
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Conference Room
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High School Library, Laboratory School
University of Chicago
Floor plan

of the room, two entrance-exits were necessary. This caused no concern so far as circulation of materials control was concerned, since the students had always checked out their own materials, and the charging desk could be in the center of the library.

Equipment

The librarian had also contacted a library equipment firm with whom she wanted to work. From 1958 to 1960 it was the librarian's good fortune to have had the services of a consultant who was a trained librarian. Mr. Robert Broadus, now teaching in the Library School at Northern Illinois University, gave invaluable help in planning the layout, furniture, and equipment. Mr. Broadus visited the old library quarters, observed the activities of the students, and discussed with the librarian all facets of the school, curriculum, and student use of the library. After two months of this activity practical plans were started. All standard equipment was used with slight modifications to meet the needs of this particular library. Because of the volume of materials with which the students worked, it was imperative to request a table for only 4 students—not standard in 1959, but currently standard (66 inches x 42 inches).

Five years were spent planning the library in the new high school building at the Laboratory School, University of Chicago. It is hoped that the best of the traditions of libraries were retained, and that flexibility was provided for the accommodation of new ideas.

Remodeling To Fit a Program

MILDRED L. KROHN
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Shaker Heights City School District
Shaker Heights, Ohio

Two elementary schools in the Shaker Heights City School District, Lomond and Ludlow, are a three-year experiment to determine how well intermediate grade children can acquire work-study skills and proceed independently to satisfy their educational needs. Lomond has an enrollment of 625 and a book collection of 12,000 volumes, Ludlow an enrollment of 300 and a collection of 6,800 volumes. The staff for these two schools includes three librarians, one clerk in each school, one audio-visual clerk, and a half-time technician in the larger school.

How did this experiment start? At Lomond, the larger school, regular library scheduling left no free time for individual library use. To make available free blocks of time, large group instruction was tried by having all the fourth-grade classes instructed at one time, the fifth-grade at another, and so on. This saved repetition of lessons and gave opportunities for the practice of skills taught and for individual research.

Lomond began with large group instruction classes in the auditorium, using the overhead projector and participation sheets as teaching aids. After some experimentation, this instruction was moved to a large classroom next to the library. Arms were installed on the chairs used so that children could write during the lessons.

After a year's experimentation the idea seemed to merit further study. Application to the Ford Foundation resulted in a matching grant of $45,000 from its Fund for the Advancement of Education. The Foundation asked that another school be included, and we selected our smallest school, Ludlow.

Lomond School

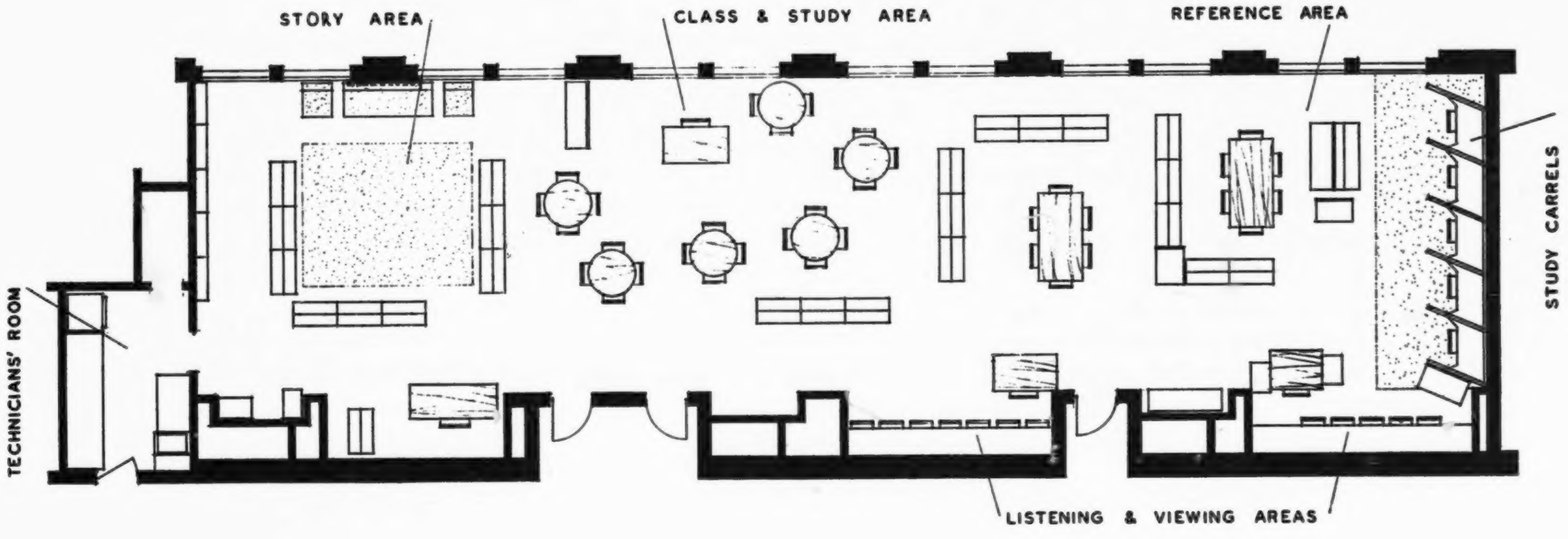
To carry out our plans, it was necessary to enlarge both libraries. The project director, and principal of Lomond, said he wanted the room to be entirely unlike the former library in appearance and arrangement because he hoped for new accomplishments. The emphasis was to be different. The traditional emphasis on the teaching process was to shift to the learning process as the more important concept. Individual ability to obtain information on a topic or problem independently, under the general direction of the teacher, was now most important. Also, results in the communication of ideas between pupils and teachers as they shared the use and presentation of appropriate materials were emphasized.

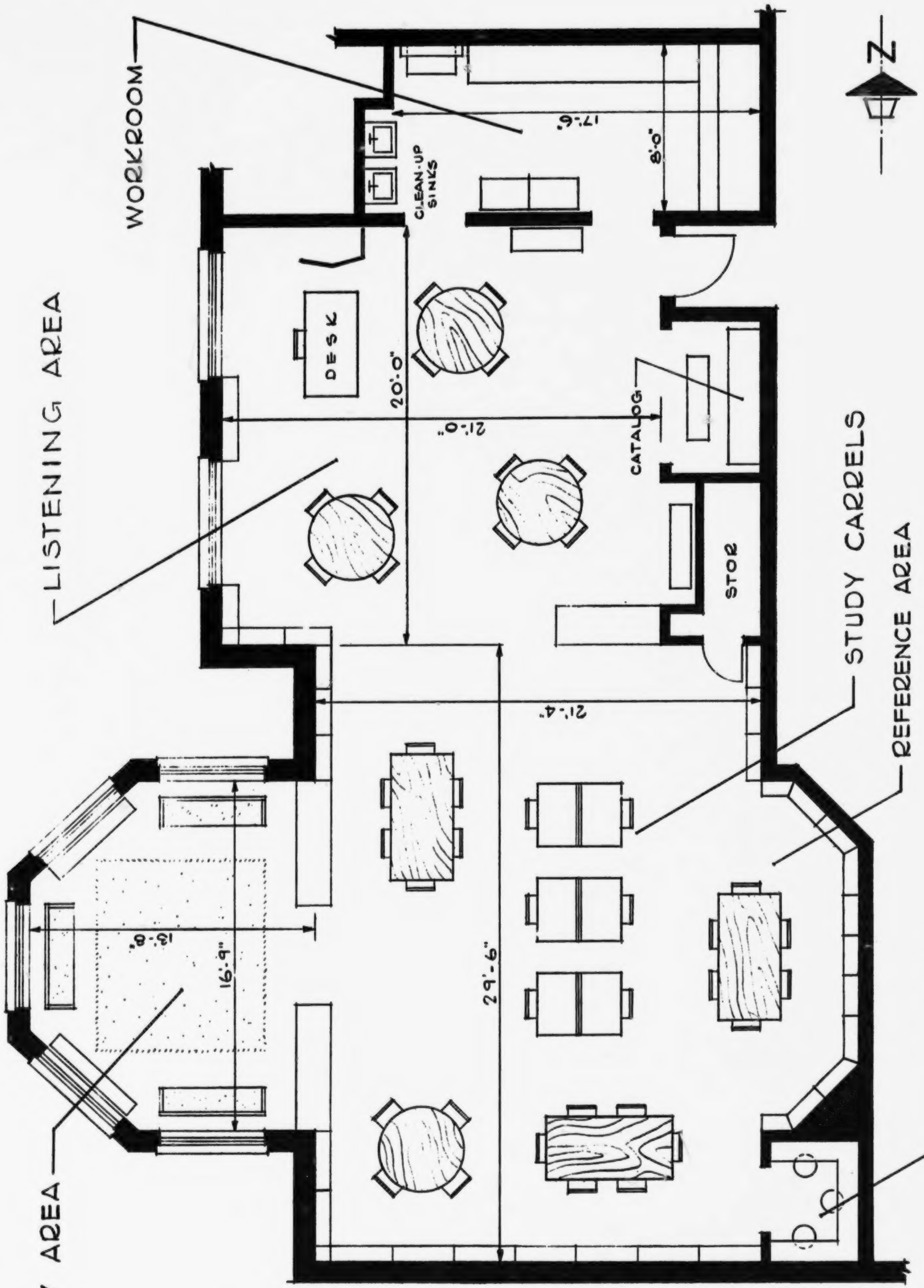
During the summer of 1962, alterations were made at Lomond. Originally the plans were to put a door in the north wall to the adjoining classroom, or perhaps a partial glass partition, and to keep that room as the large group instruction classroom. However, the addition of audio-visual materials to the existing library resulted in the entire north wall being taken out. The additional space was added to the library, and the large group instruction went back to the auditorium.

Perimeter shelving was not sufficient to take care of the 12,000 volumes, so freestanding double-faced stacks were ordered to be placed down the middle of the long room. Since we planned to have unscheduled classes in the fourth, fifth, and sixth grades, the best arrangement seemed to be to place the eight stacks in U-shaped areas.

Contrary to my better judgment—in fact, in spite of my vigorous protests—this was effected. I have

Lomond Learning Center, Shaker Heights
Floor plan




WORKROOM
CLEAN-UP SINKS
17'-6"
8'-0"
N
LISTENING AREA
DESK
20'-0"
21'-0"
CATALOG
STOR
STUDY CARRELS
REFERENCE AREA
21'-4"
29'-6"
13'-8"
16'-9"
STORY AREA
VIEWING AREA

Ludlow Learning Center, Shaker Heights
Floor plan

since thought what a conservative I was. How else is progress made except by doing things contrary to the existing order! This arrangement proved to be very practical, for activity can go on in three or four areas without disturbing any of them. Sound is absorbed because of this arrangement, and there has been no tag played around the stacks. I do not guarantee this at the secondary level, however. Shelves were built along one wall in two alcoves for viewing and listening, and on the north wall five carrels with corkboard walls were built.

The former workroom became the audio-visual technician's workshop. We are clamoring for drapes and carpeting to improve the room's appearance and hope to get them in the next year's budget.

Ludlow School

At Ludlow, the library was housed in a classroom-size room. Instead of knocking out a wall, the library moved to the kindergarten room—the largest room and a most attractive one. Its adaptability was amazing. The cloakroom became the workroom and storage area. A former cupboard became a viewing area with the building of shelves on three sides and the placing of stools there. Six commercially built study carrels became the center of the reference area, and a windowed alcove became a most attractive story area.

The total project has influenced the thinking of librarians and principals in the other schools of our system. In the elementary area, one school moved its library into the auditorium, another into the kindergarten room, and two more libraries will move into the auditorium in the fall term, leaving only three that require major building alterations to be on a par with the other libraries. One of our two junior highs is being enlarged this summer. The high school was doubled in size a year ago and enjoyed conference rooms, audio-visual materials, and individual study carrels for the first time this past school year.

Because of the numerous visitors, Ford has given us an additional grant to have a full-time public relations coordinator who will, during the next school year, take care of visitors and answer correspondence and outside requests for material on the two project schools. Our visitors have been universally enthusiastic about this program, and almost no one has been unhappy about the physical arrangement. How adaptable it is to other libraries would, in my opinion, depend on the staff available.

THE DEPARTMENTALIZED SCHOOL LIBRARY

Departmentalizing the School Library

MRS. GEORGIA RANKIN COLE
Assistant Professor, School of Library Science
University of Kentucky
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It has been said that "Vanity ruins more women than love." This is true, for think of all of us who, in our vanity, believe we can discuss the departmentalization of school libraries or some other aspect of the program! Nor is this "ruinous vanity" limited to women; men are quite as disastrously afflicted by it. The only difference is that they are not likely to be ruined by *love*.

Had vanity not stood in the way, I certainly should have seen the monstrous problems awaiting any person who attempts to discuss trends in school library quarters. However, certain proposals do assert themselves. Four are common to the many methods and procedures proposed for improving our schools and school libraries:

1. Every pupil should be given an opportunity to develop to his fullest potential. (Does this have a familiar ring?)
2. The body of knowledge is too extensive for the school to cover, and is growing at such a rapid rate that every person must continue to study and learn throughout life. Therefore, the emphasis in the schools must be to develop in the pupil the desire and capacity to assume more and more responsibility for his own education.
3. There is increasing recognition that opportunity for learning can best be provided when teachers and other members of the staff work together, each making that contribution for which he has special talent or training.
4. Instructional materials of all kinds are being used in teaching and in studying to a far greater extent than in the past.

Those who reject proposals are likely to say, "Why, that's what we've believed all the time; that's what we've been doing all these years." The enthusiastic supporters, on the other hand, may say, "This is completely different; there never has been anything like it before." Both are right. If we look at the four beliefs expounded by educators since the time of John Dewey, the philosophy has not changed, but the school programs which grew out of this philosophy have changed.

It is impossible to discuss here the implications for school libraries of all four proposals. It must suffice to discuss only one. The Trump Plan is the obvious choice, for it, of all the proposals, has been most widespread in its influence.

The Trump Plan

The term "Trump Plan" refers to the findings and recommendations of the Commission on the Experimental Study of the Utilization of the Staff in the Secondary School,of the National Association of Secondary School Principals. The NASSP, recognizing that the nationwide shortage of teachers was likely to continue for many years, appointed the Commission to recommend a plan which would make it possible to maintain the same, or better, quality of instruction by more efficient use of teacher time. The plan was called the Trump Plan after the Director of the Commission, Dr. J. Lloyd Trump. The Plan recommends the organization of the secondary schools around three kinds of activities: large group instruction, individual study, and small group instruction. The key to the Trump Plan is recognition of individual differences in teachers as well as in pupils. The Plan provides for better utilization of teacher time by organizing teachers into teams. Each teacher does the kind of work for which his talents and training best suit him. Clerks and other helpers assume nonprofessional duties. The resulting staff organization is a hierarchy ranging from teacher specialists to general aides:

Teacher specialists are career teachers who teach subject matter for which they are particularly well qualified, usually to large groups. They have general charge of evaluating students.

General teachers are qualified, certificated personnel with less experience than teacher specialists. They participate primarily as observers and consultants in discussion groups. The salary of general teachers, as proposed by the authors of the Plan, is markedly lower than that of teacher specialists.

Instruction assistants are persons with special training and experience for certain aspects of instruction. They do much of the evaluation of student work: papers of all kinds, art projects, and the like.

Clerks are available about ten hours per week per professional teacher.

General aides are adults with at least high school education. They supervise cafeteria, playground, hallways, and so on.

Community consultants are members of the community who are utilized for specific assignments where they are better qualified than any available teacher. Their contributions can be taped or filmed for future use. The practice of using the talents of people in the community is not new with the Trump Plan. Some strategically located schools have carried this practice to its ultimate, with very outstanding people in various areas teaching single classes which may be offered early in the morning or late in the afternoon.

Staff continues to include specialists such as nurses and psychologists.

The Trump Plan provides for much more, of course, than reorganization of staff time and pupil time. It calls for new approaches to learning. Perhaps the most important emphasis is on preparing the student for lifetime learning. It is the unique scheduling of teachers and students, however, which has brought about such a widespread change in school design.

Adapting libraries

We have described the school's program. Now we must plan the library quarters for a school operating under the Trump Plan. But library facilities cannot be planned in a vacuum. They must be designed in relation to the rest of the school plant. Let us look now at schools in which the Trump Plan is in operation. Here it must be emphasized that not a great many schools have adopted the Plan *in toto*, although a considerable number seem to be using elements of it. In most cases where the Trump Plan is in full operation, the schools have constructed buildings which were planned with the program in mind.

The authors of the Trump Plan emphasize the fact that the program for each school will be different. They carefully refrain from planning sample school facilities, or anything of the sort, which might become a rubber stamp for schools all over the country to copy. They do guide architects in their planning to this extent.

"Because class groups will vary in size, the school plant of the future must provide rooms for groups of 10, 20, 50, 100, or possibly more students. A variety of instructional and resource areas will replace the present series of standard, stacked classroom cubicles, each designed to contain 30 students and one teacher. Study halls as they are now known will not exist. Instead there will be study-resource rooms where students may read, listen to and view tapes, observe films and slides, work on self-teaching and self-appraisal machines, use science and other equipment, think, write, and participate in other more or less individual study activities."[1]

Obviously, the greatest change in school buildings must be in size of classrooms. Instruction may be given to groups of 50, 80, or 100, and students spend about 40 percent of their time in such large group instruction. Then they meet for another 20 percent of the week for small group discussions. The size of these groups may vary from 10 to 20. The remaining 40 percent of the student's time is spent in individual study: in the laboratory, in the library, or perhaps in some place outside the school.

In translating the Trump Plan into brick and concrete blocks, there seem to be three significant changes: (1) interior walls have become flexible and in some cases disappeared altogether; (2) room sizes, instead of being standard, vary from very small to very large; and (3) each department has been planned as a self-sufficient unit. Thus, English, science, social studies, and other departments each have their own areas. Each area has its own rooms for large group instruction. In most cases curtains, accordion doors, and the like are used to create space for small group discussion from the large group areas.

Each department or cluster, as this area is frequently called, usually has its own teacher-work or resource area. These areas vary from a kind of joint office to what amounts to a departmental library housing instructional materials of all kinds, equipment, supplies for preparing instructional materials, and even carrels or cubicles for individual study. In some schools these areas are designated as departmentalized libraries; more often, they are not.

Central libraries

And what of central libraries in these schools? Short of visiting a great many of the schools, it is difficult to find out. The libraries seem to be largely traditional, except that they are furnished with some study carrels. They are not the old two-classroom-size libraries which were standard for so long, but they seem to be little different from libraries being built in schools all over the country regardless of the program. There are exceptions to this, of course.

Mention should be made here of the schools which have been constructed recently in which the central library suite has departmentalized reading rooms. Undoubtedly, the best-known example of this is the West Leyden fan-shaped Instructional Materials Center, at Northlake, Illinois. I know also of the North Central and the Lawrence Central high schools in Indianapolis. This trend seems to indicate that in these schools emphasis is being placed on preparing students for lifetime learning.

In general, it seems that library quarters have not changed greatly under the Trump Plan, even when the rest of the school building has changed radically. Undoubtedly, many libraries in Trump Plan schools are giving very adequate service. There may be a great difference in program in these schools, but the staff has found that it can carry on the library program in traditional quarters. Probably some of us are not sorry to see the school library retain its traditional face. We liked the library as it was in the past, and we do not wish to see it changed.

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[1] J. Lloyd Trump, *Images of the Future: A New Approach to the Secondary School* (Washington, D.C.: National Education Assn., 1959), p.28.

Almost any of us will disapprove, I think, of what seems to be change for the sake of change. The library with shelving around its walls and tables in the center is considered outdated by some educators. These same people insist on lining the walls with study cubicles and shelving the books on 7-foot stacks in the middle of the floor. This latter arrangement could become as well established as the former once was. Just why it is superior to the former has yet to be explained to my satisfaction.

Actually the changes in school buildings are not so radical as they may seem. There are still roofs overhead and walls to keep out rain, wind, and snow. The library, too, will continue to be recognizable as a library. Through years of experience we have arrived at various standards for quality and usefulness in library quarters, furniture, and equipment. There is no reason for these standards to be put aside until they can be proved to be obsolete.

Whether we are reluctant clingers to the past or eager reachers for the new, we must remember at this point one of the first maxims we learned in library school. School library quarters *are* planned for the school's library program. That program, in turn, grows out of the program of the school. Then, of course, library quarters for Trump Plan schools *will* change some, just as the rest of the building has changed, and librarians must accept these changes and welcome them because they can mean improved library service.

We would have been less than human, however, if we had not been frightened by some directions which the Trump Plan has seemed to take. In the film, *And No Bells Ring*, which depicts a school of the future, the library quarters have been taken over for large group instruction, and no mention is made of where the library is now located.[2] In fact, it would seem that its resources have been distributed to form small personal libraries for students in each of the cubicles around which the action of the film centers. Dr. Trump himself has put our minds at ease regarding this matter. He has said that the student keeps numerous resources in his cubicles but that he has checked these materials out—from the library, we presume. The other question which disturbs us regards the resource areas which appear in each of the departments of the school. Will these become collections of materials purchased without plan and with no ties with the school library? This question has not been answered to our satisfaction.

Library changes

If the library is to continue to be effective, these resource areas must become libraries. I think they will become departmental libraries or branches of the central library, staffed by professional personnel. The school library then will grow more like the college library. This is in keeping with the school program which is growing even more similar to higher education: in subject matter, in scheduling, and in use of staff time. If this development seems ambitious, consider that if schools were meeting the American Association of School Librarians standards regarding personnel there would be little problem in staffing departmental libraries.

In the small school, there probably will continue to be a single, central library in the school. But it will change somewhat, as will the central library and the departmental libraries in the large school. The most obvious change will be in total size. The school library will become larger. Present space requirements are based on the assumption that the student will spend approximately one sixth of his time in the library. In Trump Plan schools he spends 40 percent of his time in individual study. At least half—probably more—of this time is spent in the library. Also, the authors of the Trump Plan specify that students will work at carrels or cubicles. Considerably more space is required to seat students in carrels than is necessary to seat an equal number at tables.

The second major change will be in the manner in which students are seated in the library. Carrels or cubicles will make up a major part of the seating. Dr. Trump has said that the school will need one for each three students enrolled.[3] These cubicles will be somewhat different from those used in the library in the past. They will be taller and will provide greater privacy; they will be equipped with drawers so that students may keep paper, pencil, and other supplies there; and they will be equipped for listening and viewing. This does not mean that there will be no tables in the library. Undoubtedly there will be some tables.

Also, I am sure we shall continue to have easy chairs here and there throughout the library. After days of reading about the Trump Plan, one can almost believe that young people of today have time for nothing but scholarly pursuits. Young people are still human and will continue to read for pleasure, and we shall continue to provide spots where they can relax with good books to read strictly for fun.

The emphasis in the Trump Plan on the use of many instructional materials by both teachers and students may mean a happy change in the use of materials which require projection or audio equipment.

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[2] National Association of Secondary School Principals, *And No Bells Ring;* 2 films, each 28½ minutes, sound, black and white (Washington, D.C.: The Association, 1960).

[3] J. Lloyd Trump, "Images of the Future for School Libraries," *ALA Bulletin,* 55:129-31 (Feb. 1961).

In time, large group and small group instruction areas will be equipped with television receivers and speakers. Cubicles, too, may have small receivers and speakers. Films, filmstrips, slides, magazines and newspapers on microfilm, and whatever other visual materials may develop in the future will be projected from a single central source. At this moment the expense of such an arrangement seems prohibitive, but with an enlarged market the cost would drop steeply.

The Trump Plan library needs considerable space for teacher use. In each library there will need to be a place or places for teaching teams to plan together so that the various resources they need will be near at hand. Teachers need places where they can study. Some new schools have included an office for each teacher, but this is not common in Trump Plan schools. The Trump Plan recognizes that teachers must continue to study and learn. The library must provide space and resources for their study.

The library will be open at hours and on days when school is not actually in session. While this idea is not new with the Trump Plan, it should be mentioned here with the reminder that libraries will be located near exits and will have provisions for independent control of heating and cooling systems.

A few people have thought that the flexible wall, or a lack of walls, which characterizes Trump Plan buildings is necessary for a satisfactory Trump Plan library. Thus, at least one library has been planned without walls. Perhaps I shall be branded as a traditionalist, but I do not believe this will be the pattern in school libraries. Flexible walls will be used in library areas as they are already being used, so that conference rooms can be made larger or smaller, the end of a workroom become a preview room, and so on. Perhaps we have too long laughed at the librarian who is a "keeper of books." I think the time is fast approaching when the value of a fine library in the school will be widely recognized. The library's public will realize that many of these materials will be used only rarely but that they are needed. They will want walls around their libraries.

New programs

At this time it seems that the library has a chance to realize its full potential under the Trump and other plans. Certainly all those who are influential in undertaking a new program of instruction believe that the Trump Plan and other proposals provide a great opportunity for learning. These programs provide a more important place for the library in learning than before. The library program will be a challenging one for many reasons.

1. With departmentalization it will be logical for librarians to be specialists in various areas. No longer will administrators seek a librarian for the school. They will look for science librarians, social studies librarians, and so on, as the need exists. These librarians will be particularly well qualified to serve on the departmental teams of which they are a part.
2. Libraries will give more direct service to teachers than they have in the past. The teacher specialist described in the Trump Plan needs a librarian working side by side with him, spending almost as many hours as he spends in preparing a lecture.
3. There will be less distinction between librarians and teachers than there has been in the past. Librarians will do *more* teaching than before—not only will they teach students to use the library, but they will take their places as members of the teaching team and may teach anything for which they are particularly well qualified. The fact that schools are teaching students to take responsibility for their own education means that the talents of the librarian will be in greater demand.
4. The library collection will give attention to the need of teachers for continuing study in their subject areas. Not only will the library purchase professional materials for teachers; it will also purchase the newest materials in their subject areas. There will be considerably more duplication of materials than in the past.
5. While recognizing that the library serves students best by working through teachers, librarians understand also their part in helping the student to take responsibility for his self-education. They will work with him in his independent study. Each student will use many materials, many of which will be very technical materials.

Is this program really likely to happen or is it only a dream? If school libraries never were quite able to achieve their full potential before, is there any reason to believe that they can do so in the future? Will administrators employ enough librarians to man departmental libraries? Or will there simply be decentralization of libraries with resulting chaos? None of us can answer these questions at this moment, of course. There are reasons for optimism, however.

The more effective the school library, the more likely it is to have the staff, budget, and space necessary for its operation. Under the Trump Plan there is the opportunity for the library to be more effective than ever in the past. Surely any teacher who uses the library as implied in the Plan will recognize the benefits to his students and to himself! An appreciative, yet demanding faculty is the best support which a library can have in seeking additional staff.

The growing similarities between schools and colleges have been recognized. Let us hope that public schoolteachers will grow more similar to college faculties in their attitudes toward libraries and librarians. It is reasonable to assume that as the demands made on secondary school libraries become more similar to those made on college libraries, school library standards will need to be raised until they are similar to standards for college libraries. One of the rewards of being on a university faculty is that university teachers realize that the library services they desire will not be available unless the library is adequately housed, adequately supported, and adequately staffed.

The progress which school libraries have made in the three years since the publication of *Standards for School Library Programs* is evidence that higher goals for school libraries can be reached.[4] More important, the national climate is right for them. Never before have reading and libraries been held in such high esteem in this country, nor has as much attention been focused on them. These factors combine into a formula which seems to assure success for school libraries in achieving their full potential under the new educational programs.

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[4] American Association of School Librarians, *Standards for School Library Programs* (Chicago: American Library Association, 1960).

A Departmentalized School Library: Two-Floor Plan

MYRTLE ELLIS
Head Librarian
York Community High School
Elmhurst, Illinois

School librarians are being challenged as never before to help create adequate school library quarters. This involves active participation in school planning — working with architects, superintendents, and school boards. The teen-age explosion in our public libraries gives us additional reasons to persuade the public to provide adequate school library quarters for our students. The librarian who has the opportunity to help build new school library quarters will find it both exciting and exhausting. It requires hours of research, visitation, and much private meditation. The best of library schools cannot prepare one for the minute planning involved.

It has been said that the only thing that is permanent is change. To keep abreast of constant change, our school library literature is indeed helpful. The publication of the new *Standards for School Library Programs* in 1960,[1] and the Illinois Curriculum Program booklet *Instructional Materials*,[2] gives every librarian much to contemplate.

When planning new library quarters the librarian must be aware of new educational trends, see as many library programs as possible, exchange ideas constantly with other librarians, and make a scrapbook of ideas for future reference. The perfect school library has never been built. Moreover, changes in the philosophy of school library service make it impossible. Each school library has to find its own distinctive character, plan, and function depending on the community, the faculty, the curriculum, and the student body which it serves. Every school librarian can dream of an ivory tower, but excellent salesmanship, backed by sound reasoning, is essential if an adequate, all-embracing library program is to be achieved.

Library planning

Our present quarters at York are six years old. The superintendent is a man of vision. To do something unconventional, to experiment, to build a library on a completely different pattern with the emphasis on separate departmentalized reading rooms, is a grave responsibility. We would not have had the fortitude to proceed without the enthusiastic support and encouragement of leaders in the school library field, such as Dr. Frances Henne. A rough sketch of our plans was presented to the faculty and received their approval and support before we started working with the architects. The architects also accepted the challenge and gave us wonderful cooperation.

We now have in our district two libraries: York and Willowbrook. Each library, a two-floor plan, has four reading rooms, three of which are partitioned from the adjoining lobby by glass. Both libraries have a seating capacity for more than 200 students, shelving for about 20,000 volumes, and a total area of about 9,400 square feet. Downstairs, off the lobby, is a union catalog with a complete record of the library book collection. Each reading room upstairs has a duplicate catalog for that particular collection.

The libraries are designed on a subject divisional plan. The four reading rooms are language arts, social studies, science and the arts, and fiction. The material in each room has been chosen to fit curriculum needs in each of these subject fields, including pamphlet files and special reference tools.

"Why two levels?" you may ask. Experience teaches us the first task of every librarian is to determine the total number of square feet required for the library program desired. The second task is to insist that the location is advantageous and adjacent to the academic classrooms. Since we were assigned a long, narrow wing for our new library, we had to choose between quarters on both sides of a hall, or quarters on two levels. We chose the two-floor library, making us very accessible to the social studies classes on the second floor plus being adjacent to some English classes on both floors. The two-floor library called the students' attention not once but twice to the library program, giving us twice the publicity. It also reinforced the program by creating two traffic centers rather than one. An automatic lift between the two levels makes the collection somewhat flexible.

Why multiple rooms or departmentalized libraries? Possibly many schools, like ours, are finding that taking additional subjects and participating in extracurricular activities leave students little time to use the library during the day. In our district, school-bus transportation precludes any concentrated preparation of library assignments before or after school. Faculty members seldom have time for a leisurely hour to become acquainted with new library materials. These were significant factors in planning new quarters for our district. Our answer was a laboratory classroom library to which each teacher could bring classes for several periods or for several days at a time. The teacher,

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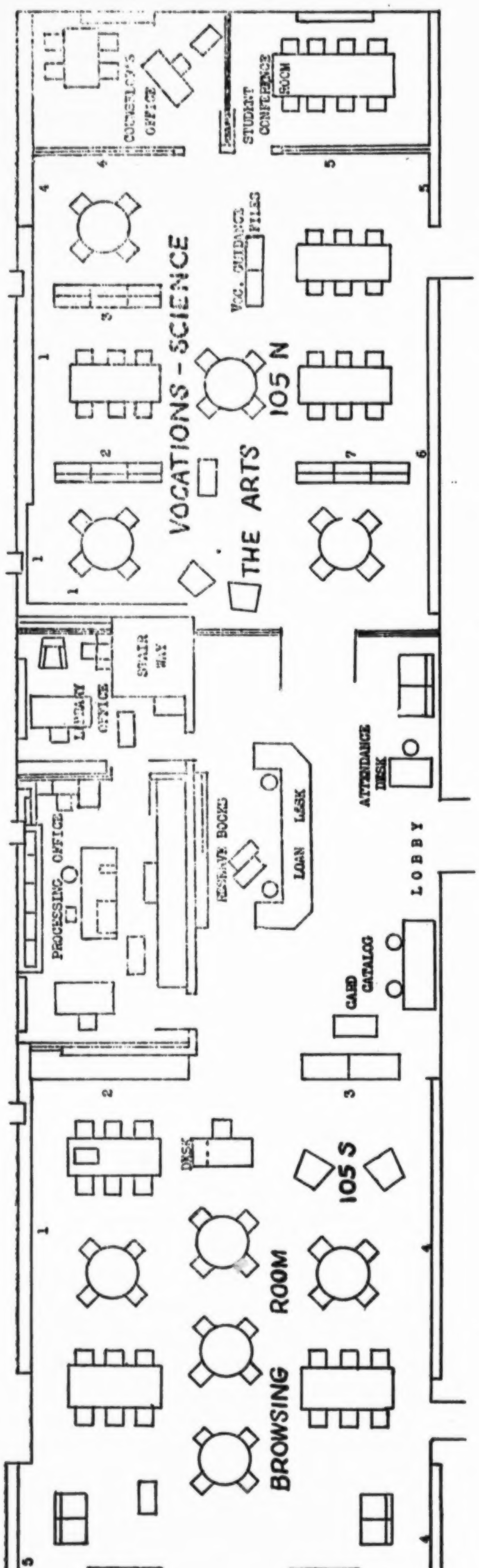
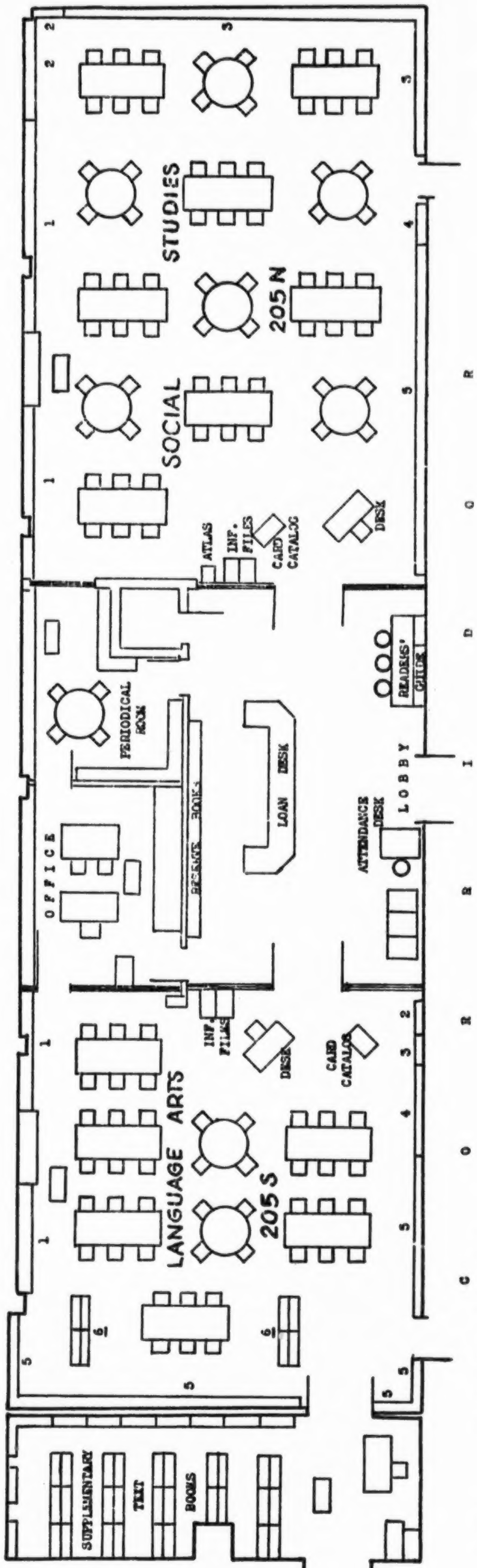
[1] American Association of School Librarians, *Standards for School Library Programs* (Chicago: American Library Association, 1960).

[2] Illinois Curriculum Program, *Instructional Materials* (Springfield: Office of the Supt. of Public Instruction, 1961).


COUNSELOR'S OFFICE
STUDENT CONFERENCE ROOM
VOC. GUIDANCE FILES
VOCATIONS - SCIENCE
THE ARTS
105 N
STAIR WAY
LIBRARY OFFICE
ATTENDANCE DESK
PROCESSING OFFICE
RESERVE BOOKS
LOAN DESK
LOBBY
CARD CATALOG
DESK
105 S
BROWSING ROOM
CORRIDOR

York Community High School Library
First floor


SOCIAL STUDIES
205 N
ATLAS
INF. FILES
CARD CATALOG
DESK
PERIODICAL ROOM
READERS' GUIDE
OFFICE
RESERVE BOOKS
LOAN DESK
ATTENDANCE DESK
LOBBY
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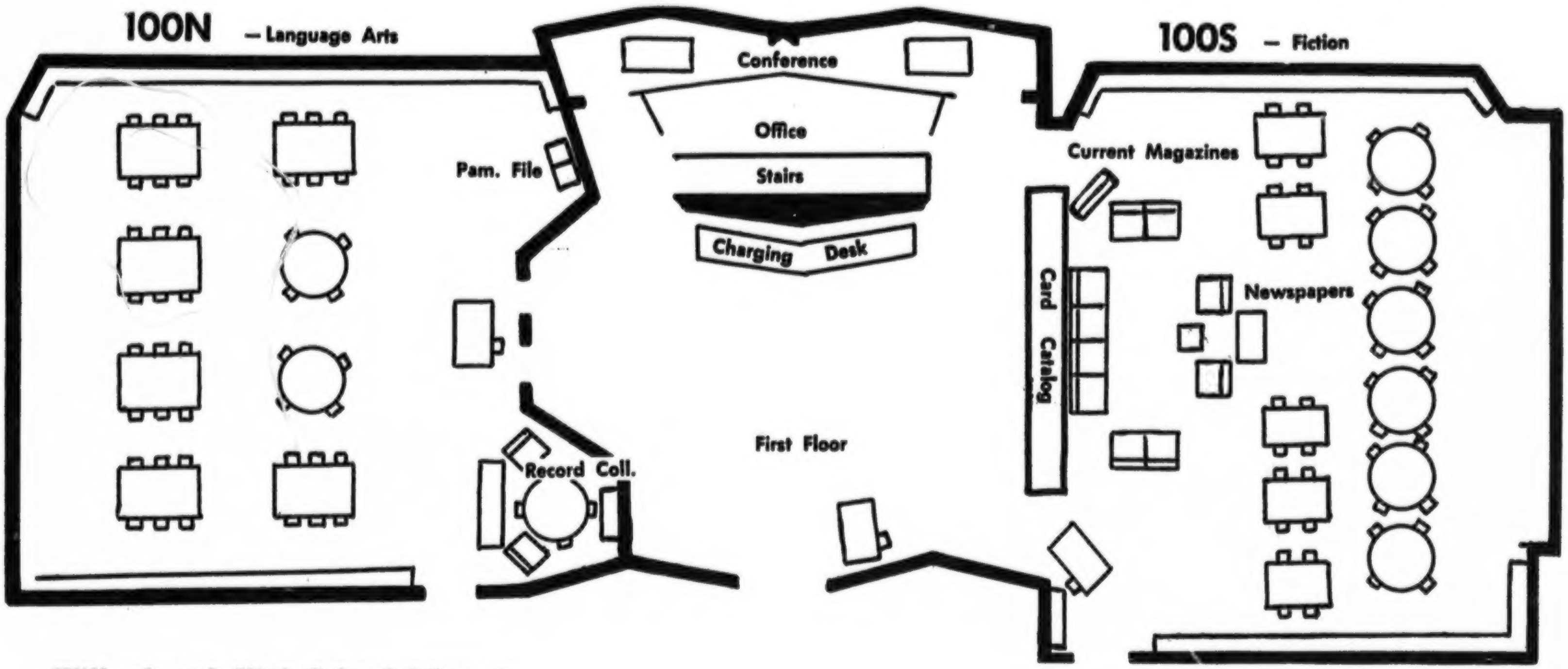
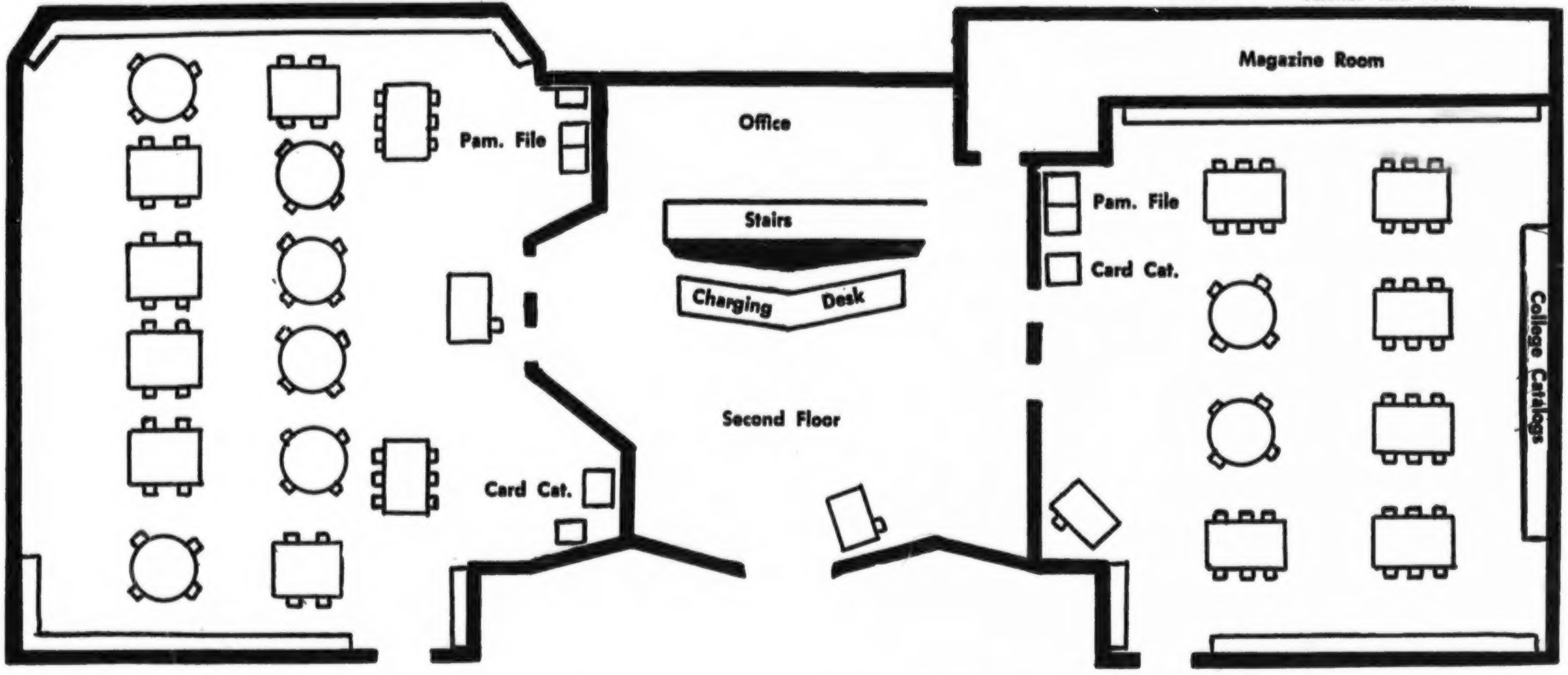
CARD CATALOG
LANGUAGE ARTS
205 S
SUPPLEMENTARY TEXT BOOKS
CORRIDOR

York Community High School Library
Second floor


100N – Language Arts
Conference
Office
Stairs
Charging Desk
Pam. File
Record Coll.
First Floor
Card Catalog
Current Magazines
Newspapers
100S – Fiction

Willowbrook High School Library
First floor


200N – Social Studies
Pam. File
Office
Stairs
Charging Desk
Card Cat.
Second Floor
200S – Science and Arts
Magazine Room
Pam. File
Card Cat.
College Catalogs

Willowbrook High School Library
Second floor

the librarian, and the students could then function as a unit in working with library materials.

Many activities can be carried on without too much conflict. For example, we can schedule twenty-eight classes a day, though we do not encourage being programmed that heavily. Work on term papers for English, a class in vocations, book talks in the fiction room, plus a speech class working on current magazines, can and sometimes do go on during just one class period.

Staff reaction

What is the reaction of our own library staff to our two-level, four reading rooms program now that we have occupied our quarters over a period of years? Did the district reproduce a second library in the image of the original because the library program was so successful? These are questions which we have been asked many times.

Unfortunately the librarians, the faculty, and the student body have not been polled in regard to the specific strengths and weaknesses of our particular physical setup. This should have been done before meeting with the architects to plan a second library. Although this action was recommended, the community asked that the second school be equal in all physical facilities. Under these circumstances, the responsibility for expression concerning the advantages and disadvantages of our program is mine.

At the inception we hoped to create material centers that would allow for the maximum amount of class scheduling, so that the majority of students could have time and opportunity to use the library. Our physical quarters have successfully met these demands. We wished to avoid the large one-area reading room, seating over 200 students, that called for extensive supervision on the part of the librarian. In our present quarters no librarian supervises more than 60 students. As our professional staff increased, each librarian was a specialist in her particular subject field. For example, we now have a trained librarian with a social studies major who orders and catalogs the materials for the social studies reading room, in addition to working with the faculty and students in her particular subject area. Professional staff responsibility is clearly defined. Each librarian contributes an equal and definite share in the total library program.

Two-floor library needs

I feel sure our librarians in the district would agree that in a two-floor library:

1. More trained staff is required to operate, maintain, and present materials.
2. Duplicate cataloging for the second-floor reading room is time-consuming for the librarians and for the ordering and processing department.
3. Library orientation for freshmen is a *must,* and the training program has to be more extensive.
4. Upperclassmen, in order to master library techniques, should be reoriented to the various reading rooms in the light of their new subjects.
5. Though the flexibility of the collection through the use of the booklift makes transportation of books rather simple, it does involve careful planning on the part of the teacher and the librarian.
6. Librarians must communicate with one another constantly in regard to programming, policies, and ordering.
7. The two-floor plan is somewhat more expensive from the standpoint of duplication of some encyclopedias and reference tools.

There are times, after a weary day, when all of us feel that a one-floor library with all patrons, librarians, and secretaries on one floor would make life much simpler. Nevertheless, in the over-all view, as we move from room to room and floor to floor taking a long look at the activities throughout the four reading rooms, we wonder what it would be like to have all this traffic on one floor. Would we be able to survive?

What kind of physical facilities would I recommend for a third library in my district? I would hope we could have the freedom, money, and time that went into the original planning of York. I would hope for many visitations and consultations with other librarians outside of our district, plus constant meetings with our own professional district staff for whom I have the greatest respect. When the staff reached an agreement as to the right program for the new school, I would look ahead to the day when we would be asked to justify our plans to the administration, school board, and architects. Considering the fine *esprit de corps* that has existed among our library department, the administration, and the board, we would be confident of a sympathetic audience.

A Departmentalized School Library: One-Floor Plan

H. F. ALWIN
Librarian
Homewood-Flossmoor High School
Flossmoor, Illinois

Planning a school library, or remodeling existing quarters, begins with a study of that school's philosophy, objectives, and curriculum and what part the library is to play in the total educational program. Homewood-Flossmoor High School serves two suburbs of the same name located about twenty-five miles south of Chicago. The area has a population of some 20,000, mostly in the middle socioeconomic level.

Planning the Homewood-Flossmoor High School started, as it should, several years before the school opened in September, 1959, with the educational program. A committee of citizens, as well as the board of education and administration, contributed to the plans. A survey of the two communities revealed that 75 percent of the students upon graduating from high school attended college. It was upon these facts that a curriculum and, of course, the library were planned.

This school is built on the one-floor plan. The library is located in the central core of the buildings, which includes the administration and business offices and the science, mathematics, business education, and fine and practical arts classrooms. This building is air-conditioned for summer school usage. The other four buildings are set away from the central building some 100 feet and are reached through enclosed passageways.

Planning details

The library is a large room on the south side of the central building. The main reading room is 106 feet long and 40 feet wide. The floor level of the library is 2-1/2 feet lower than the rest of the building. The main entrance is on the west end, down five broad steps past a beautiful planter and the circulation desk. A ramp on the east end of the library permits students in wheel chairs to enter the library, and also serves as a way to push out trucks of books for classroom use.

The floor covering is asphalt tile in shades of brown. All heating and cooling units are located in the ceiling, covered by perforated metal paneling. The temperature of the library is kept comfortable at all seasons of the year. Fluorescent lighting with tubes hidden by translucent fixtures provides adequate artificial lighting for all reading areas. Natural lighting enters the main reading room through a bank of 18-inch windows near the 12-foot ceiling on the south wall of the main reading room, and also through the large windows on the south wall in the four rooms adjoining the main room. In each of the windows in the four bays, which come to a point in a saw-tooth fashion, there is a small panel which can be opened for ventilation if necessary. In the 30-inch space below the windows, there are two shelves, the lower one slanting. There is also a door in one of the rooms which will eventually lead onto a terrace.

Along the north corridor wall, above the 6-foot shelving, windows make possible an inviting view down into the library for those passing by in the corridor. On the east wall, in front of the two conference rooms, there is 7-foot shelving. The shelving is all in 3-foot sections, 8 inches deep. The bottom shelf is slanted for ease in reading titles and numbers.

By a rectangular arrangement of low bookcases, picture and map file, atlas cases, newspaper racks, and card catalog, a reference area is created in the center of the library. (This is the way the main library room was built in 1959.)

On either end of this main room, on the regular floor level, are two other departments under the library's administration. At Homewood-Flossmoor the library is responsible for the distribution, collection, storage, and care of the rental textbook and supplementary book collection. On the west end, beside the good-sized workroom (15 feet x 18 feet) which is on the same level as the library, is the textbook room. This room (16 feet x 16 feet), which is entered through the workroom and from the hallway, houses the school's collection of textbooks — some 9,000, when they are all turned in in June. Except for the distribution in the fall and the collection in the spring, the work here is carried on by the clerical assistants. Beyond the ramp, at the east end of the library on the main building floor level, is the audio-visual department. The audio-visual area (16 feet x 40 feet) has an office, a workroom, and two preview rooms and is also under the supervision of the library.

By 1961, the school's enrollment had grown to more than 1,200 students, and several additions were planned. The library was one of the areas to be enlarged to make room for more books and more students to use library facilities.

Remodeling features

Although the architects, Perkins and Will, had envisioned more library space, they had planned for it in one of the classroom wings to be built later. The administration and the librarian decided that in order to have all educational materials centrally located and administered, it would be better to enlarge the existing area of the library by moving out the outside south wall. Our decision to divide space and the book collection by subject materials was based on the standards, which recommend that, for supervision and good service, not more than 100 students and preferably not more than 80 be seated in one reading room. Since we were building for an anticipated school enrollment of 2,500 students, it was imperative that, in order to seat 10 percent of the students as recommended by the standards, we build multiple reading rooms.

One of the impressive features of the original library was the south wall of five saw-tooth bays, separated by Lannon stone piers. These piers were 9 feet high and 18 inches thick. They protruded four feet into the room and extended 10 feet beyond the wall on the outside. Since we had decided to departmentalize the library, these piers made natural room dividers for five rooms. An addition was built, 120 feet long and 30 feet wide, divided into five rooms each 24 feet x 30 feet. The ceiling in the new rooms is 8 feet high.

The rooms are divided from the main reading room by walls which have 5-foot shelving, with 3-foot windows above the shelving. There are doors connecting the main reading room with the subject area rooms, as well as doors opening between the rooms.

One of the rooms became the periodicals room to house the increasing collection of magazines, operating on a plan to keep magazines for five years. We had outgrown the small magazine room located behind the charge-out desk. This room became the library office. The microfilm readers are in the periodicals room. We have also put the vertical files in the periodicals room. There is a counter in front of this room which serves as a room divider, and the students do not enter the periodicals room except for those using the microfilm readers. Students present their requests for materials at the counter. They have to get the information for their magazine requests from the *Readers' Guide*, and that for their pamphlet subject requests from the card catalog. The space which was the library office in front of the periodicals room has become the listening area.

One of the new rooms we built became the social science library; in this area are the 300's and the 900's except for biography. The magazines which relate to this subject area are also kept here. Another room became the English and language room, housing the 400's and 800's as well as the related magazines. Of the two rooms remaining, one will be used as a faculty study and professional library until the faculty study and lounge are built in about three years; and the other is presently occupied by individuals doing typing for the faculty. As our enrollment increases and the book collection grows, one of these rooms will become a science and applied science (500's-600's) reading room. The other may become a fine arts reading room, or it may be that the social sciences will spill over into a second room. Another possibility is that we may move fiction into one of these rooms and make it a browsing center.

These rooms presently seat 34 students. Most of our classes have about 25 students; therefore, other students who come to the library in small groups can avail themselves of the materials in these rooms. Teachers tell us that they like to bring their classes to the subject area rooms for library research work.

Throughout the library we used rectangular tables, round tables, individual study tables, and carrels. With the present space and furnishings we can seat 185 students. The enrollment will be 1,750 next year. Eventually, when we add the two rooms now being used for other purposes, there will be room to seat slightly more than 250. As I have said, the new standards recommend that the library be able to seat 10 percent of the student body, and the maximum anticipated enrollment of Homewood-Flossmoor is 2,500.

Time schedules

Homewood-Flossmoor High School has hour classes and no study halls. Students may come to the library at 8:00 in the morning and stay until 5:00 in the evening. During the regular daily class schedule, students come to the library by classes, accompanied by the teacher, or in small groups on passes. Usually arrangements are made a week or more ahead of time. A system of house telephones permits late arrangements for small groups if necessary. The library is also open two evenings a week, from 7:30 to 9:30.

We have had five different classes, or approximately 155 people, in the library at one time so far. It becomes quite a busy place. Students are free to move about from room to room to gather materials, but teachers are generally encouraged to keep their classes together in one area. On an average, 500 students come to the library in a day.

At first, it was anticipated that it might be somewhat difficult to supervise these rooms, especially before and after school when there were no teachers present and only one librarian was on duty. This was not a big problem the first year. The rooms are often used by the more serious students, who want to get away from the freer movement which goes on in the main reading room. Groups who need to converse extensively are encouraged to use the conference rooms. One of the previously mentioned conference rooms is called the college room, and all literature pertaining to going to college and college catalogs are kept there. This room is extensively used by college counselors and students after school.

A Departmentalized School Library: One-Floor Plan

H. F. ALWIN
Librarian
Homewood-Flossmoor High School
Flossmoor, Illinois

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Planning the Homewood-Flossmoor High School started, as it should, several years before the school opened in September, 1959, with the educational program. A committee of citizens, as well as the board of education and administration, contributed to the plans. A survey of the two communities revealed that 75 percent of the students upon graduating from high school attended college. It was upon these facts that a curriculum and, of course, the library were planned.

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The floor covering is asphalt tile in shades of brown. All heating and cooling units are located in the ceiling, covered by perforated metal paneling. The temperature of the library is kept comfortable at all seasons of the year. Fluorescent lighting with tubes hidden by translucent fixtures provides adequate artificial lighting for all reading areas. Natural lighting enters the main reading room through a bank of 18-inch windows near the 12-foot ceiling on the south wall of the main reading room, and also through the large windows on the south wall in the four rooms adjoining the main room. In each of the windows in the four bays, which come to a point in a saw-tooth fashion, there is a small panel which can be opened for ventilation if necessary. In the 30-inch space below the windows, there are two shelves, the lower one slanting. There is also a door in one of the rooms which will eventually lead onto a terrace.

Along the north corridor wall, above the 6-foot shelving, windows make possible an inviting view down into the library for those passing by in the corridor. On the east wall, in front of the two conference rooms, there is 7-foot shelving. The shelving is all in 3-foot sections, 8 inches deep. The bottom shelf is slanted for ease in reading titles and numbers.

By a rectangular arrangement of low bookcases, picture and map file, atlas cases, newspaper racks, and card catalog, a reference area is created in the center of the library. (This is the way the main library room was built in 1959.)

On either end of this main room, on the regular floor level, are two other departments under the library's administration. At Homewood-Flossmoor the library is responsible for the distribution, collection, storage, and care of the rental textbook and supplementary book collection. On the west end, beside the good-sized workroom (15 feet x 18 feet) which is on the same level as the library, is the textbook room. This room (16 feet x 16 feet), which is entered through the workroom and from the hallway, houses the school's collection of textbooks—some 9,000, when they are all turned in in June. Except for the distribution in the fall and the collection in the spring, the work here is carried on by the clerical assistants. Beyond the ramp, at the east end of the library on the main building floor level, is the audio-visual department. The audio-visual area (16 feet x 40 feet) has an office, a workroom, and two preview rooms and is also under the supervision of the library.

By 1961, the school's enrollment had grown to more than 1,200 students, and several additions were planned. The library was one of the areas to be enlarged to make room for more books and more students to use library facilities.

Remodeling features

Although the architects, Perkins and Will, had envisioned more library space, they had planned for it in one of the classroom wings to be built later. The administration and the librarian decided that in order to have all educational materials centrally located and administered, it would be better to enlarge the existing area of the library by moving out the outside south wall. Our decision to divide space and the book collection by subject materials was based on the standards, which recommend that, for supervision and good service, not more than 100 students and preferably not more than 80 be seated in one reading room. Since we were building for an anticipated school enrollment of 2,500 students, it was imperative that, in order to seat 10 percent of the students as recommended by the standards, we build multiple reading rooms.

One of the impressive features of the original library was the south wall of five saw-tooth bays, separated by Lannon stone piers. These piers were 9 feet high and 18 inches thick. They protruded four feet into the room and extended 10 feet beyond the wall on the outside. Since we had decided to departmentalize the library, these piers made natural room dividers for five rooms. An addition was built, 120 feet long and 30 feet wide, divided into five rooms each 24 feet x 30 feet. The ceiling in the new rooms is 8 feet high.

The rooms are divided from the main reading room by walls which have 5-foot shelving, with 3-foot windows above the shelving. There are doors connecting the main reading room with the subject area rooms, as well as doors opening between the rooms.

One of the rooms became the periodicals room to house the increasing collection of magazines, operating on a plan to keep magazines for five years. We had outgrown the small magazine room located behind the charge-out desk. This room became the library office. The microfilm readers are in the periodicals room. We have also put the vertical files in the periodicals room. There is a counter in front of this room which serves as a room divider, and the students do not enter the periodicals room except for those using the microfilm readers. Students present their requests for materials at the counter. They have to get the information for their magazine requests from the *Readers' Guide*, and that for their pamphlet subject requests from the card catalog. The space which was the library office in front of the periodicals room has become the listening area.

One of the new rooms we built became the social science library; in this area are the 300's and the 900's except for biography. The magazines which relate to this subject area are also kept here. Another room became the English and language room, housing the 400's and 800's as well as the related magazines. Of the two rooms remaining, one will be used as a faculty study and professional library until the faculty study and lounge are built in about three years; and the other is presently occupied by individuals doing typing for the faculty. As our enrollment increases and the book collection grows, one of these rooms will become a science and applied science (500's-600's) reading room. The other may become a fine arts reading room, or it may be that the social sciences will spill over into a second room. Another possibility is that we may move fiction into one of these rooms and make it a browsing center.

These rooms presently seat 34 students. Most of our classes have about 25 students; therefore, other students who come to the library in small groups can avail themselves of the materials in these rooms. Teachers tell us that they like to bring their classes to the subject area rooms for library research work.

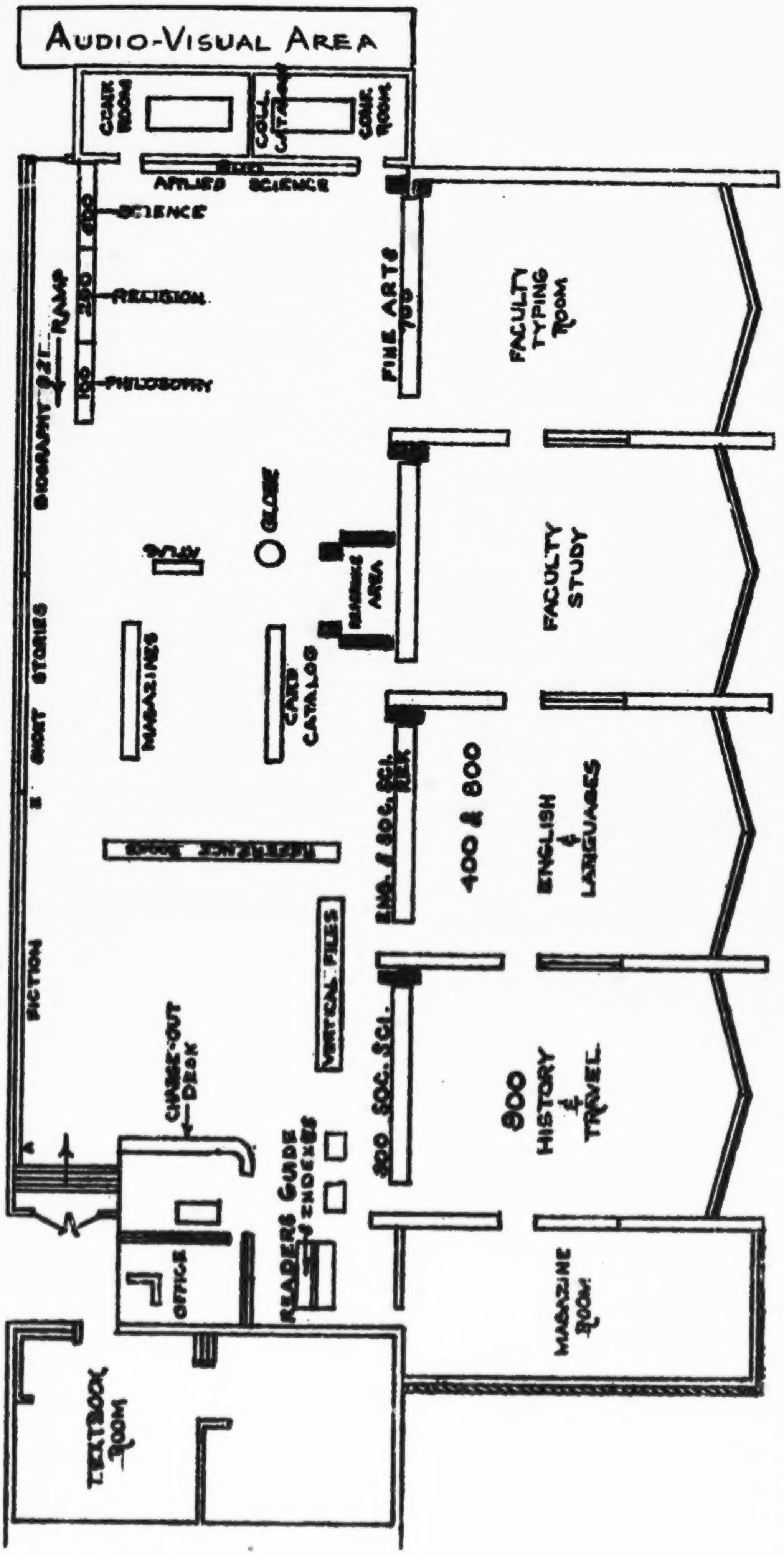
Throughout the library we used rectangular tables, round tables, individual study tables, and carrels. With the present space and furnishings we can seat 185 students. The enrollment will be 1,750 next year. Eventually, when we add the two rooms now being used for other purposes, there will be room to seat slightly more than 250. As I have said, the new standards recommend that the library be able to seat 10 percent of the student body, and the maximum anticipated enrollment of Homewood-Flossmoor is 2,500.

Time schedules

Homewood-Flossmoor High School has hour classes and no study halls. Students may come to the library at 8:00 in the morning and stay until 5:00 in the evening. During the regular daily class schedule, students come to the library by classes, accompanied by the teacher, or in small groups on passes. Usually arrangements are made a week or more ahead of time. A system of house telephones permits late arrangements for small groups if necessary. The library is also open two evenings a week, from 7:30 to 9:30.

We have had five different classes, or approximately 155 people, in the library at one time so far. It becomes quite a busy place. Students are free to move about from room to room to gather materials, but teachers are generally encouraged to keep their classes together in one area. On an average, 500 students come to the library in a day.

At first, it was anticipated that it might be somewhat difficult to supervise these rooms, especially before and after school when there were no teachers present and only one librarian was on duty. This was not a big problem the first year. The rooms are often used by the more serious students, who want to get away from the freer movement which goes on in the main reading room. Groups who need to converse extensively are encouraged to use the conference rooms. One of the previously mentioned conference rooms is called the college room, and all literature pertaining to going to college and college catalogs are kept there. This room is extensively used by college counselors and students after school.


AUDIO-VISUAL AREA
CONF. ROOM
COLL. CATALOG
CONF. ROOM
APPLIED SCIENCE
500
SCIENCE
200
RELIGION
100
PHILOSOPHY
RAMP
BIOGRAPHY 921
FINE ARTS 700
FACULTY TYPING ROOM
ATLAS
GLOBE
REFERENCE AREA
FACULTY STUDY
MAGAZINES
CARD CATALOG
SHORT STORIES
ENG. & SOC. SCI. REF.
400 & 800
ENGLISH & LANGUAGES
REFERENCE BOOKS
VERTICAL FILES
FICTION
CHARGE-OUT DESK
300 SOC. SCI.
900 HISTORY & TRAVEL
READERS GUIDE & INDEXES
OFFICE
MAGAZINE ROOM
TEXTBOOK ROOM

Homewood-Flossmoor High School Library
Floor plan

It must be admitted, however, that all these departments and a large reading area are quite a sizable job for two and one half librarians to supervise. Because the charge-out desk is at one end of the main reading room, it requires much walking back and forth across the long reading room. When planning a departmentalized library, it might be better to have the main reading room square rather than a long narrow room, and have the department rooms on each side of the main reading room. The main entrance and charging desk, too, could then be more centrally located. One school successfully used a triangular design and placed four reading rooms adjacent to the central browsing and general reference area. A natural entry was created at the tip of the triangle. Two other schools have the departmentalized libraries and conference rooms along two sides of the main reading room.

It would likewise appear to make the work easier if all departments under the administration of the library would be on the same floor level, unless there are definitely two-story levels in the library plan. Finally, it would seem that if the textbooks and audio-visual were part of the library, these two should be located next to each other and on the same floor level to avoid climbing either ramp or steps.

THE ELEMENTARY SCHOOL LIBRARY

The Elementary School Library Planned as an Instructional Materials Center

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A general and observable characteristic of American education, which differs somewhat from education in other parts of the world, is its changing nature. Most changes have come from forces within our society rather than through efforts of the educational system. It also has been evident that the rate of change at the elementary level has not always been so rapid as at the secondary level. This is no longer true. Tremendous changes are taking place in elementary schools throughout our country. Most easily seen are the changes in the architecture of the school buildings.

The number of new buildings is the direct result of great population increases in recent years. The structural changes, however, reflect: (1) changes in the attitude of our society toward elementary education; (2) newer techniques and experiments in teaching methods which require more space and more flexible areas; (3) learning activities being provided for our children; (4) the provision of many types and kinds of instructional materials; and (5) concern for the individual child and his learning and creative needs.

The professional literature is replete with books and articles that highlight research findings in education which evaluate these concepts and provide excellent guidelines for planning and constructing better schoolhouses to meet these changes. Some are listed in the footnotes and Bibliography of this paper. The books and articles emphasize the need for group planning on the part of school board members, school administrators, teachers, librarians as materials specialists, parents, citizens, and school architects. They recommend a community survey to provide facts relating to population trends, school building obsolescence, site possibilities, and economic costs. They suggest a study be made of educational trends and patterns of teaching as well as an analysis of classroom and specialized educational space needs. Specific details and helpful suggestions are given in many of these guides to assist in making wise decisions as to the best type of school plant to provide, the most flexible and expansible arrangement of space areas, and the need for furniture and equipment that is well designed for functional use.

Concept changes

A significant observation that should be made at this point is the inclusion in recent books on elementary school planning of a section relating to well-designed areas for the school library and instructional resources of the school. Books written prior to 1956 either ignored the possibility of need for a school library at the elementary level, or made passing reference to a small area of classroom size planned for such purpose. Books written since 1956 take for granted that there must be an elementary school library designed as a laboratory for purposeful learning activities. Recommendations for schools with enrollments from 300 or more pupils include areas that contain: (1) a minimum, essential space for reading, viewing, and listening activities by individuals or groups; (2) space for exhibits; (3) space for office, work, and conference needs; (4) space for the production of materials; (5) storage and stack space for school-owned printed and nonprinted learning resources and for equipment that is rented or borrowed; and (6) space for professional resources and work needs of teachers.

School building planners are aware of the newer methods of teaching and newer media of instruction which require more space for child learning activities of an individual or group nature. They take into account the needed change in arrangement of teacher to learner.[1] They also give recognition to community need and use of school facilities. They urge flexibility and expansibility in planning to take care of future as well as of present needs.[2]

Instructional materials center

A question that might well be raised at this point is whether new school buildings, designed and built for kindergarten through the sixth grade, do provide for a school library planned as an instructional materials center. Are there such schools and, if so, where are they? Are there many or are there only a few? Complete answers to these questions cannot be given, for changes are taking place every day, but the recent study conducted under the auspices of the U.S. Office of Education, Educational Media

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1. Educational Facilities Laboratories, Inc., *Here They Learn;* first annual report (New York: The Laboratories, 1959). 32p.
2. D. B. Harmon and Associates, *Flexibility in the Co-ordinated Classroom* (Cleveland, Ohio: E. F. Hauserman, 1956). 37p.

Branch, with a grant from Title VII of the National Defense Education Act has factual data to give partial answers.

The study is in its final stage, and the report is now being written by the author of this paper. Some of the data available indicates that school libraries functioning as instructional materials centers are to be found at each level of the educational system. Elementary school libraries were visited in twenty states, and Florida, Kentucky, North Carolina, and Virginia were found to have examples of well-planned facilities and programs at the elementary level. Seven states have examples of school libraries that have inadequate quarters but have fine programs of service and resources, and do function as instructional materials centers. These include Florida, Indiana, Kentucky, Louisiana, Maryland, Pennsylvania, and Wisconsin. Other examples, in states visited, include elementary school library programs that either have inadequate quarters or are in beginning stages of development but do have programs that function as instructional materials centers. These states include California, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, Minnesota, New York, North Carolina, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, Washington, and Wisconsin.

Lack of time or lack of schools prevented the survey of elementary school libraries in other states. Many of the elementary libraries visited were located in schools built long before plans included a school library as an essential area of the elementary school plant, or before a library was considered as a materials center. As the teaching methods in these schools changed and educational programs expanded to meet modern needs, a school library was considered essential. Space was located, resources and equipment were provided, and staff was hired to develop the library program. Increasing enrollments and need for classroom space have jeopardized some of these initial programs. But each month and each year the number of such school libraries increases and will continue to increase, inadequate though the total number seems to be when national statistics are quoted.

In light of the present-day need for more adequate space and well-designed areas and facilities for an elementary school library, it may be fortunate that only one third of the elementary schools in our country have school libraries. School systems and communities that are now making plans for an elementary library program can take advantage of new trends and ideas, and can design and provide for the expanding resources and services now recognized as essential in our elementary schools. It is also easier to plan for new schools than it is to plan for remodeling old quarters when space is inadequate or building structure is inflexible.

Modern trends

What are some of the characteristics today of the elementary school and the resulting library programs that need to be taken into account when planning quarters, facilities, and resources to accommodate them?

Learning activities at the elementary level are planned so as to promote large and small groups working together[3] and to provide for ability grouping of children for study and work projects. The activities include use by children and teachers of many instructional and learning resources, such as television, electronic learning devices, laboratories, and programmed materials. There is stimulation to use a wide variety of reference materials, including audio and visual resources for problem solving, and to make possible experience opportunities that are meaningful to the child. Activities involve group construction, display of individual and group work, the development of cultural skills, the exploring and investigating of areas of special interest to a child — to mention only a few.

Teaching methods are much more liberal and experimental and allow less memorizing, more discussion, more laboratory-type work, more small study groups, and more individualized learning situations. Curricula may be more rigid, but not teaching methods.[4]

Classroom and special service areas are being designed and equipped to provide conditions under which children learn best. Rooms are being designed for purposeful group planning and activities, for individual study and research, and for class discussions and evaluations. These activities require larger floor areas than did learning programs of the past.

There also needs to be more room for expansion for tomorrow as well as for today. School buildings are said to have a functional life span of about fifty years. They need to be flexible in architectural design and construction to allow for the continuing change in the educational programs.

The new look

What is the new look in building design for elementary schools? There are many. Buildings are much more functional in design. They tend to be one-story structures located on spacious grounds.[5] They have open or enclosed corridors and walkways depending on the climatic conditions of the area.[6] Some schools are built on the campus plan, with clustering buildings housing small class units and a total school enrollment of no more than 400-500 pupils and preferably less.

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[3] National Council on School House Construction, *Guide for Planning School Plants* (1958 ed.; Nashville, Tenn., 1958), p.40.

[4] Walter McQuade, ed., *Schoolhouse* (New York: Simon & Schuster, 1958), p.16.

[5] National Council on School House Construction, *op. cit.*, p.43.

Primary grades are housed in areas separate from the intermediate classes and have their own play areas but share expensive facilities, such as cafeterias, auditoriums, gymnasiums, and libraries. This may mean a separate library building or a library wing as a part of the administrative unit of the school. The arrangement of the library area provides for the needs of the two age groupings.

There is, also, the school-within-the-school plan of the campus-type arrangement. In this pattern each unit is self-contained with its own administrative and teaching staff, but again shares facilities. The size of each unit will determine whether library facilities are shared or separate. Some communities have small neighborhood units of cottage-type buildings with two, three, or four rooms for the younger children. These buildings are planned to be used for residences when school needs change.

School construction usually provides nonload-bearing partitions[7] free of conduits, pipes, and ducts to facilitate rearrangement of room space when and if needed. Heating and ventilating systems are zoned to serve separate areas. Convenient storage areas for the entire school are planned with movable and stackable furniture, and equipment and facilities are designed for multiple use in the classroom or library. Portable stages and science laboratories, freestanding cabinets as temporary subdivisions, and facilities for community groups are part of the planning. Acoustical controls[8] take into account that noise is a barrier to hearing and concentration and, therefore, to learning. Schools are being built with radio and television antennas[9] wired to each classroom, study, and service area, and with conduits to anticipate future needs as well as to provide for school-wide use of newer media of instruction available today.

The library program

How do these elements affect the library program and its spatial requirements? Engelhardt has listed a number of items to keep in mind in preliminary planning for functional library quarters.[10] They include: (1) scope of library service; (2) integration with community life; (3) supplementary library facilities; (4) varied school use of the library; (5) general reading room; (6) library classrooms; (7) service for teachers; (8) supplementary rooms; (9) essential equipment; (10) details of equipment; (11) volumes to be housed; (12) librarian's office and workroom; (13) conference rooms or alcoves; and (14) natural and artificial lighting.

Analyzing the first of these elements in more detail, one needs to know what is the scope of elementary library service and what activities are carried on in the library areas by children, by teachers, and by the library staff. The U.S. Office of Education study previously mentioned revealed that children use the library for individual study, reference use of materials, checking out of books, browsing and recreational reading, reference to the card catalog, viewing filmstrips or looking at pictures, listening to recordings, listening to a story hour program or viewing television programs, planning exhibits, and lessons on the use of library resources.

Teachers use the library in planning units of instruction, and seek assistance from the school librarian in finding resource materials. They use professional materials, course outlines, and periodicals to keep up to date with teaching methods. They use typewriters and duplicators in preparing class materials. Also, they evaluate and utilize supplementary textbooks for special units, read for pleasure, work together on planning units of work, and search for illustrative teaching materials.

The library staff — professional, clerical, student assistants, and P.T.A. helpers — are responsible for the ordering and processing of all materials used in the library program, including books, pamphlets, periodicals, and all types of audio and visual materials and realia. The professional staff work with children and teachers in selecting, locating, and using library resources. The staff are responsible for audio-visual materials and equipment, and provide for the scheduling, storage, distribution, and inspection of them. These are but some of the activities carried on in the dynamic elementary school library programs of today.

Theory in practice

Keeping in mind the previously mentioned activities and resources used in the library or in the classroom, we need to look for unique features essential in planning for functional space and facilities. Picture books, periodicals, and disc recordings each require a special type of shelving. Oversize, adjustable shelves for reference books and magazine storage are usually standard equipment.

In some elementary school libraries recordings are housed in an audio-visual storage room or laboratory. In other schools they are in the library reading room, so as to be easily accessible to children and teachers. The same is true of filmstrips. In some school libraries they are in specially designed cupboards or on shelves which pull out for ease in locating items needed. In other school libraries the filmstrips are housed in the workroom or audio-visual storage room.

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[6] *Ibid.*, p.44.

[7] *Ibid.*

[8] Walter McQuade, ed., *op. cit.*, p.134.

[9] Benjamin Handler, *Economic Planning for Better Schools* (Ann Arbor: Univ. of Michigan, 1960), p.61.

[10] N. L. Engelhardt and others, *School Planning and Building Handbook* (New York: F. W. Dodge, 1956), p.76.

Children and teachers use the card catalog for finding available resources, and then locate the filmstrip, book, pamphlet, recording, or microscope desired. More and more libraries are using the dictionary card catalog with varied colored cards for the listing of all instructional materials located in the library or in the school. Community resource files also are kept in the library. If there is close cooperation with museums, zoos, and public libraries, their special lists and guides are made available.

Since elementary school children find no more difficulty in locating and using nonbook materials than in locating printed materials, careful consideration needs to be given to the housing of many of these resources in the library reading and study areas. Housing instructional materials in offices, storerooms, or workrooms puts a barrier between them and the user. Expensive, little-used, and bulky objects needing special housing are usually cared for in the audio-visual storage area.

Space needs depend on the size of the collection, the type of materials available, where they can be used most efficiently and effectively, and whether they are for teacher and class use, for child and individual use, or for both. Room for expansion, flexible shelving, movable cabinets, cupboards, equipment, and stackable furniture need to be provided if special library resources and programs are to be available wherever and whenever needed.

All instructional materials and equipment should be planned for class use as well as for use in the library areas. Book trucks with rubber wheels, and portable audio-visual equipment carts and projection tables, should be provided in sufficient quantity to make class use easy and efficient. Where the school library is in a different building from the classrooms, or on another floor, plans should include storage facilities on each floor or in each building for audio-visual equipment.

Scheduling is usually handled through the library, as are all library facilities. Flexible scheduling of classes or groups in the library requires more space, but provides for meaningful use of library resources and services. It also takes into account the needs of small children and their listening and creative activities in addition to those of the upper grades.

Small areas and carrels planned for reference work or group projects are more meaningful in the elementary school library program than are conference rooms, and space for these activities is needed. Booths, carrels, or small rooms equipped for individual viewing or listening need to be provided for the child who wants to reinforce what he has heard or seen by listening or looking again. Children who have been absent or who need to review should have available to them tapes, kinescopes, or disc recordings when they return to school. Teaching machines and programmed instructional materials for individualized learning of skills need to be accessible when needed, whether in class or in the library.

All of these teaching devices and resources are available in some schools, and more will be available as funds from federal and state agencies are provided and utilized. Today's child is not handicapped as often as the adult is by resistance to use of the newer media for learning. Research as well as observable evidence indicate the effective use that can and is being made of television as a teaching and enrichment medium — only one of many teaching tools or devices now being used in schools. Several excellent books and pamphlets are available giving detailed information regarding these devices.[11]

Working space

To provide for large or small groups, and for individual use of the library resources, it is necessary to have tables and chairs that can be arranged to suit different needs. Flexible table arrangements make possible group discussions and group projects; stackable tables to clear space make possible group listening for such activities as story hour programs. Accordion walls as room dividers provide for expansion of areas. Such walls are not very satisfactory as sound barriers, and use of them should be planned accordingly.

A library classroom makes it possible to give formal instruction when needed. Also, it frees the main study area for continued use by groups or individuals coming from classes for reading, reference purposes, viewing, or listening activities. The generally recommended reading space for 10 percent of the school enrollment is apt to prove inadequate for the expanding program of the library as a materials center and learning laboratory. Probably total space, including all areas of the instructional materials center, should be planned for 40 to 50 percent of the enrollment.[12]

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[11] Florida, State Dept. of Education, *The Materials Center* (Bulletin No. 22C; Tallahassee, 1954). 136p.

_____ *Planning Materials Centers* (Bulletin No. 22E; Tallahassee, 1958). 49p.

Pennsylvania, Dept. of Public Instruction, Curriculum Development Program, *The School Instructional Materials Center and the Curriculum: The Library Audio-Visual Center* (Harrisburg: Dept. of Public Instruction, 1962). 37p.

The work-storage area of the library can be more effectively used if planned in connection with the art workroom, the teachers' workroom, and the duplicating areas of the school office. Facilities and equipment that can be used interchangeably by faculty and staff reduce costs and result in more efficient equipment utilization. Duplication machines needed by office and teaching staff can also be used for making some transparencies needed in the classroom. Darkroom facilities and a production area for teacher-made materials may be provided in the school, or be located at a system, county, or district materials center. If it is in the school building, it needs to be planned as part of the resources center with appropriate equipment, outlets, counter, and tools needed.

If central processing of all printed and audio-visual materials is provided for the school from a central office, less work space may be needed for the library. Work space, however, for preparing exhibits, mending, clipping, or mounting pictures and for pupil-initiated display or illustrative projects will be needed regardless of central processing. Work space or laboratory area is also needed for the production, handling, and inspecting of audio-visual materials and equipment. Provision for repair of equipment is usually contracted for from a commercial agent or from the district center. If repairs are to be made at the school, space provision for such service is needed.

Since teachers and pupils both need work space for library-initiated projects, their requirements need to be recognized in the planning of work space. The librarian's office, adjacent to the work areas, needs to be situated so as to give a clear view of the main study and reading area for easy supervision.

Audio-visual needs

Studios for closed-circuit television, audio-learning laboratories, listening stations, learning instrumentation rooms, film preview room, and planetarium and observatory areas, as described in the publications put out by the Pennsylvania Department of Public Instruction in 1962, indicate the trend in planning space for a school library as an instructional materials center.[13] Most of the elementary schools visited in the twenty states indicated that television instruction planned by local teachers for local needs proved more satisfactory than programs originating at studios far removed from the school system. Provisions for the electronic devices are being made available in many of the schools, and other systems are studying the needs and problems involved. Equipment and facilities needed for these planned areas are provided in several publications.[14] It is suggested that many functions and facilities can be performed in one room with planned areas for each facility rather than in separate rooms for each. Space areas rather than rooms need to be kept in mind when looking to future building needs. Expansibility and flexibility are key words.

If the space can be equipped for previewing and listening, it will make it more convenient for teachers in selecting resources for purchase, loan, or rental for class use. Additional resources are usually available for teachers at the administrative center of the school system, but they do not preclude the need for some of the materials housed in the library.

Location of the library unit or units should be considered, first, in relation to the total physical plant of the school — one floor, one building, or several buildings; second, in relation to pupil and teacher use during school hours. Many elementary schools provide for library services during summer terms as well as during regular school periods. Outside entrances and location near to truck-loading areas make for convenience in use for delivery purposes and for after-school use of the library facilities.

Suggestive floor plans are available for ideas in planning the wise use of space needs and space availability. Each area designed for a school needs to be created to fit the individual and particular program of that school and should not conform to any rigid pattern. Reading the literature, visiting schools that have made progress in developing programs to fit modern educational needs of pupils and teachers, and consulting with library supervisors, architects, electronic engineers, and specialists in the communication media, as well as having discussions on the local level by local school personnel, will provide a climate of thinking and planning that will produce plans for functional and flexible space to meet local needs. The elementary school library of the future that is planned as an instructional materials center will play a vital role in providing for quality education for American children of today and tomorrow.

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[12] Pennsylvania, Dept. of Public Instruction, Curriculum Development Program, *op. cit.*, p.15.

[13] *Ibid.*, p.23.

[14] Amo DeBernardis, *Planning Schools for New Media* (Washington, D.C.: U.S. Dept. of Health, Education, and Welfare, 1961). 72p.

Helen Hefferman and Charles Bursch, *Curriculum and the Elementary School Plant* (Washington, D.C.: Association for Supervision and Curriculum Development, 1958). 71p.

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An Elementary School Library: Lauderdale Manors School

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A library is a service, not a building. It can exist in a truck, in a barn, in an old water tank, but a basic shelter of some kind is a prerequisite. We realize that to get the full benefit of a library program, something more than basic shelter is required. If an efficient and smooth-running organization is to result, the shelter must be adapted structurally to the activities that go on within it. As school libraries become increasingly comprehensive in scope, their physical facilities must be adapted to meet their newer functions.

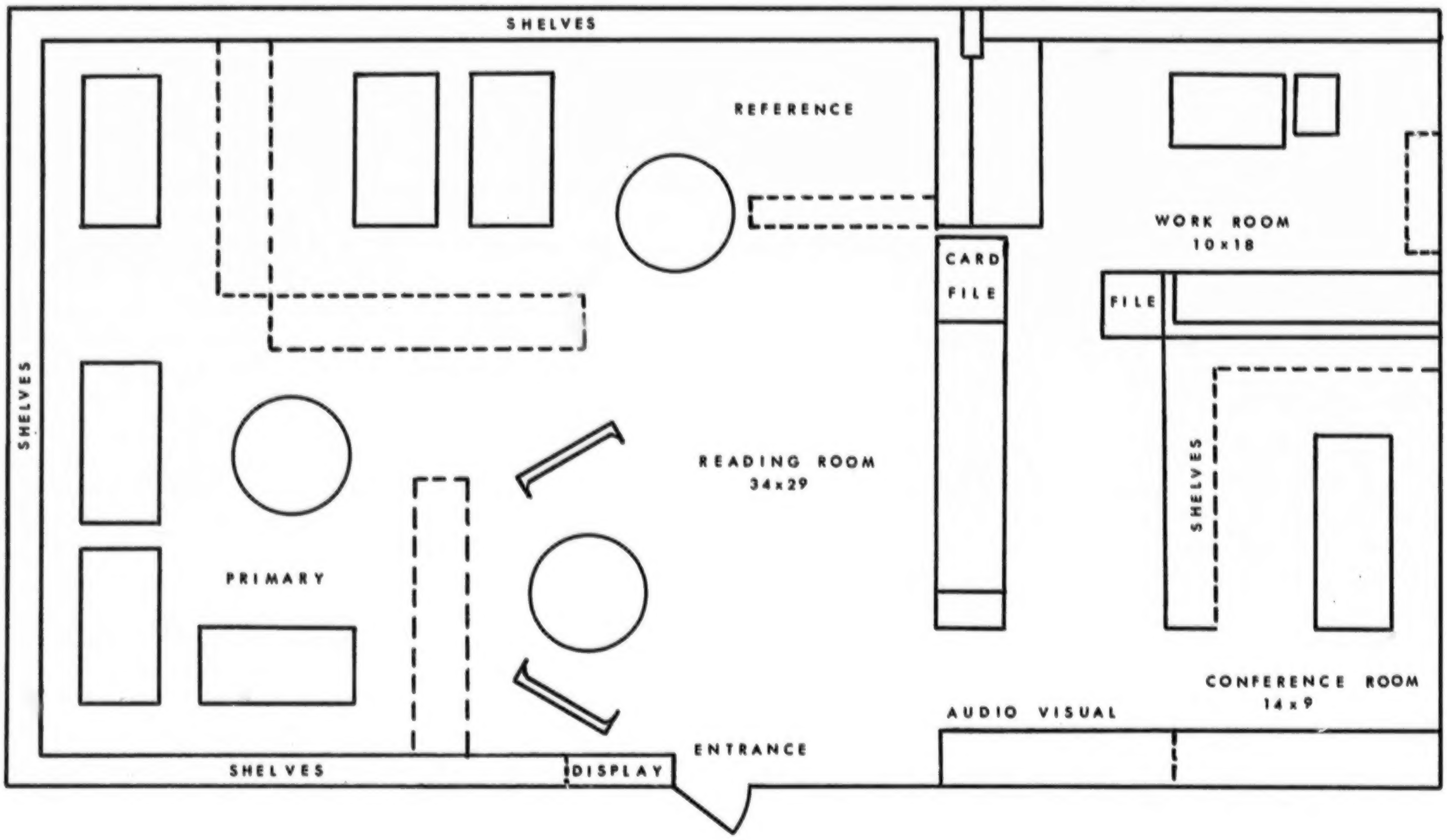
The perfect physical plant does not spring full-blown, and despite our careful planning, we sometimes doubt that the perfect physical plant even exists. However, in Florida, we particularly are proud of our progress in developing school library programs and facilities during the past ten years. We believe much of it is due to the now famous Florida "materials center" concept and the cooperative planning it has engendered.

At the foundation of Florida's school library development program lies the ideal of making the widest possible range of instructional materials available to the highest number through centralization of all learning materials. A noble effort is being made to ensure that every elementary school child will have good library services available. This ideal does not exist statewide, but more models are springing up. State standards, based on the Florida materials center plan, have reinforced the local efforts in many cases.

Model center

The model elementary school materials center contains books, magazines, newspapers, and information and picture files, along with maps, globes, realia and museum objects, filmstrips, tapes, recordings, slides, transparencies, charts, and other forms of communication. It houses and distributes the equipment necessary for the use of these materials. Movie projectors, filmstrip projectors, opaque and overhead projectors, record players, tape recorders, and other audio-visual equipment are provided and scheduled by the central center. Not all Florida school libraries conform to this model, but Lauderdale Manors does fit the description in every detail.

Lauderdale Manors Elementary School
Floor plan



Lauderdale Manors is a large elementary school in Fort Lauderdale. A total of 1,100 students and 40 faculty members is serviced from one central facility. Let us look first at the physical plant — it will give you some background for a brief look at its program — which we consider its unique feature.

The floor plan for the materials center at Lauderdale Manors is the work of local school architects employed by Broward County. It is based on space allocation and equipment specification standards developed at the state level. It follows the general patterns outlined in *Planning Materials Centers.*[1] This bulletin defines the areas of activity and their space allotments. It also gives sample floor plans and detailed drawings for built-in cabinets and storage areas to accommodate audio-visual equipment, recordings, magazines, picture books, and workroom and office supplies. The Lauderdale Manors layout is not an exact reproduction of any of the sample plans, but it incorporates most of the recommended features.

It must be pointed out that the total space allotment, which is less than 1,500 square feet, is based on the assumption that the desirable enrollment for an elementary school is not more than 750 pupils. Lauderdale Manors has maintained a consistent enrollment in the neighborhood of 1,000 during the past seven years, despite the efforts of the school board to reduce its size by trimming its boundary lines. We have found that a materials center designed for 750 students, and servicing over 1,000, encounters expansion problems very early. Up to now, we have modified the floor plan by adding more facilities within the original walls. Every foot of available space has been made as functional as possible, and in some cases multipurpose areas have been set up within the building. The conference room, for example, serves also as an audio-visual previewing and storage room, through the addition of cabinets and curtains for darkening. More recently, the installation of some extra shelving for professional books has given it the added function of a faculty reading and study room.

Area allocations

The reading room area of 1,140 square feet has a seating capacity of 52. It houses almost 7,000 library books, plus magazines, newspapers, reference collection, card catalog, a display case, and two bulletin board areas, plus some audio-visual materials such as recordings and filmstrips. By adding counter-height shelving when expansion was necessary, we have divided the reading room into areas for different activities. Reading and browsing, circulation, reference, storytelling, and teaching the use of the library to small groups and individuals have all been provided for in this space. It is possible for several different activities to go on simultaneously in the library. One group may be writing reports in the reference corner; others may be browsing for recreational reading, reading magazines, or checking out audio-visual materials for room use; and a storytelling session may be going on in the primary corner at the same time. The circulation desk is near the entrance and provides the break between the reading room and the conference and work areas.

The conference room has an area of approximately 175 square feet and a seating capacity of 8. It houses audio-visual equipment and professional shelves and serves a multitude of purposes, as we have mentioned. It is partitioned from the main room with clear glass jalousies so that supervision can be exercised by the librarian when curtains are opened. When curtains are drawn, it becomes a private conference room or study room.

The workroom, with its floor space of only 168 square feet, manages to serve as an office, receiving room, magazine storage area, and book processing and mending center. The side adjacent to the main reading room also has a glass jalousie partition. The work counter, sink, and overhead cabinets take care of processing and mending supplies, and the shelving around the outside wall takes care of magazine stacks and books being processed. Here, again, space is at a premium — especially when you consider that it is the work area for the librarian, a part-time clerk, a staff of 12 volunteer P.T.A. assistants, plus occasional student helpers. The problem is alleviated simply by the fact that the schedules of the assistants are staggered, and the day-to-day activities of the librarian require a great amount of duty on the main floor. Seldom are more than two or three persons occupied in this space at one time, though it is never unoccupied.

On the aesthetic side, our physical facilities are enhanced by a pleasant, inviting atmosphere. Draperies, potted plants, and lounge furniture have been added. Most of all, a 30-foot mural along one high wall above the bookcase is a center of attraction for children and visitors alike. It must be noted here that these extras in decor did not come from budgeted school funds. They have been financed by the P.T.A. volunteer committee through profits from the annual book fair which they sponsor.

All these physical facilities add up to something more than basic shelter and something less than the ideal. We do not have carpets and music, but we have a building that is reasonably adapted to the scope of our program and to our school's philosophy of individual learning.

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[1] Florida, State Dept. of Education, *Planning Materials Centers* (Bulletin No. 22E; Tallahassee, 1958). 49p.

Operating plan

Lauderdale Manors School operates under a unique plan which is called the Continuous Progress Plan. It eliminates grade lines in the primary unit and stresses individual growth rather than group performance. A child advances at his own rate, and is exposed to enrichment and more learning as fast as he is ready for it. Naturally, reading is at the core of this kind of program, and a materials center that is always accessible is essential. The library's open schedule plan of operation dovetails perfectly with this philosophy.

No entire class is scheduled for regular library periods. The exceptions are a story hour for first-year students, and a library orientation program for all classes at the beginning of every year. Thereafter, the library is open and available throughout the entire day to every child. Students visit the library individually or in small groups to check out a book or to work on research projects. When they need help, the librarian is on hand to give on-the-spot assistance and instruction in library skills. These skills develop quickly when a child sees a need for knowing, and they are not likely to be forgotten when another occasion arises.

Our children begin very early to develop these skills, because a library-conscious faculty sees to it that the children are aware of the library and creates many occasions for them to come. Reading for pleasure, for enrichment, and for information are all stressed in the classroom. Many teachers also keep a record of children's outside reading, and every teacher makes sure that all students get a chance to check out books at least once a week. Many do this far more often. Some of the faster-reading students visit us daily. There is no limit to the number of times they can come, so long as there is a reason for coming.

This kind of promotion of the library is, of course, not limited to the teacher's efforts. The librarian sees that teachers are informed of new materials, makes frequent bulletin board displays that tie in with classroom activities, and sends materials of all kinds to the classroom for use with particular units of study. The more our lines of communication are kept open, the more we all benefit from the use of what we have.

Our circulation figures show that the library is being used extensively by faculty and students alike. Our average of approximately 1,200 books a week is more than one book per person for our population, and this does not take into account the many reference books and periodicals which are used daily in the building. Statistics, though, can often say one thing and mean another. The real satisfaction comes with watching the children grow more and more independent in their use of library skills and with the certainty that the library is an integral part of their learning experiences.

An Elementary School Library: Chantilly School Library

GLORIA BROWN
Librarian
Chantilly Elementary School
Charlotte, North Carolina

The 1,984-square-foot library is the center of instructional activity in the Chantilly Elementary School. It is used by teachers and students for research, curriculum enrichment, and recreational reading.

Filmstrips, slides, recordings, models, charts, collections, pamphlets, maps, globes, science kits, realia, magazines, and books are organized for use by groups or individuals. Films from the audio-visual center are borrowed weekly and distributed throughout the library. Record players, projectors, screens, tape recorders, bioscope, microscope, magnifying glasses, and filmstrip viewers for individual or small group use are provided to make use of these materials.

Grades 1-6 come as a class with their teacher for scheduled library periods. Grades 3, 4, 5, and 6 come twice a week; Grades 1 and 2 once a week. These class periods are used for reading guidance, stories, book talks, dramatizations, lessons on the library, study skills, reference, research work, and browsing. Individuals and small groups (teachers and students) are free to come to the library as the need arises to use the facilities.

Reading room — 1,581 square feet

The reading and interest circle in front of the southwest wall has 37 chairs in deep shades of red, yellow, and green, arranged in two rows, taller chairs in the back. The two browsing areas are separated by a medium-sized bulletin board. Above the display groups is a mural-type bulletin board featuring library-related artwork of the children. (All artwork is done by the children.) Storyhours, dramatizations, book discussions, and any instruction that does not require the use of tables take place in this area.

Eight apronless tables, 5 round and 3 rectangular, are placed conveniently in the reading room; chairs are taken from circle area to supplement 32 matching chairs when needed. Library instruction involving writing or the use of tables takes place here. Browsers and researchers find them useful, also.

The informal furniture is arranged in an L-shape in the northwest corner. Three red-covered lounge chairs, a tall lamp for an end table, and a low table for books, magazines, and plants comprise this popular grouping. Above the shelving are figures of Snow White and the Seven Dwarfs made by the children.

The circulation desk is near the east wall of the reading room within easy reach of entrances to the conference-reference room, audio-visual-library workroom, and reading room. Nearby is the card catalog. The L-shaped, counter-height circulation desk is composed of interchangeable units. On the entrance side is a depressible book truck for books not returned that morning. (Classes scheduled that day return books in the morning so that books may be slipped and shelved and ready for circulation.) On the other side is an oversized book truck with a standard-sized book truck nearby. Biographies and fiction books are placed on one, and nonfiction and easy reading on the other, to facilitate shelving. Counter-height stools are available for those who prefer to sit at the circulation desk. Two sections of low shelves behind the desk are used for nonfiction books.

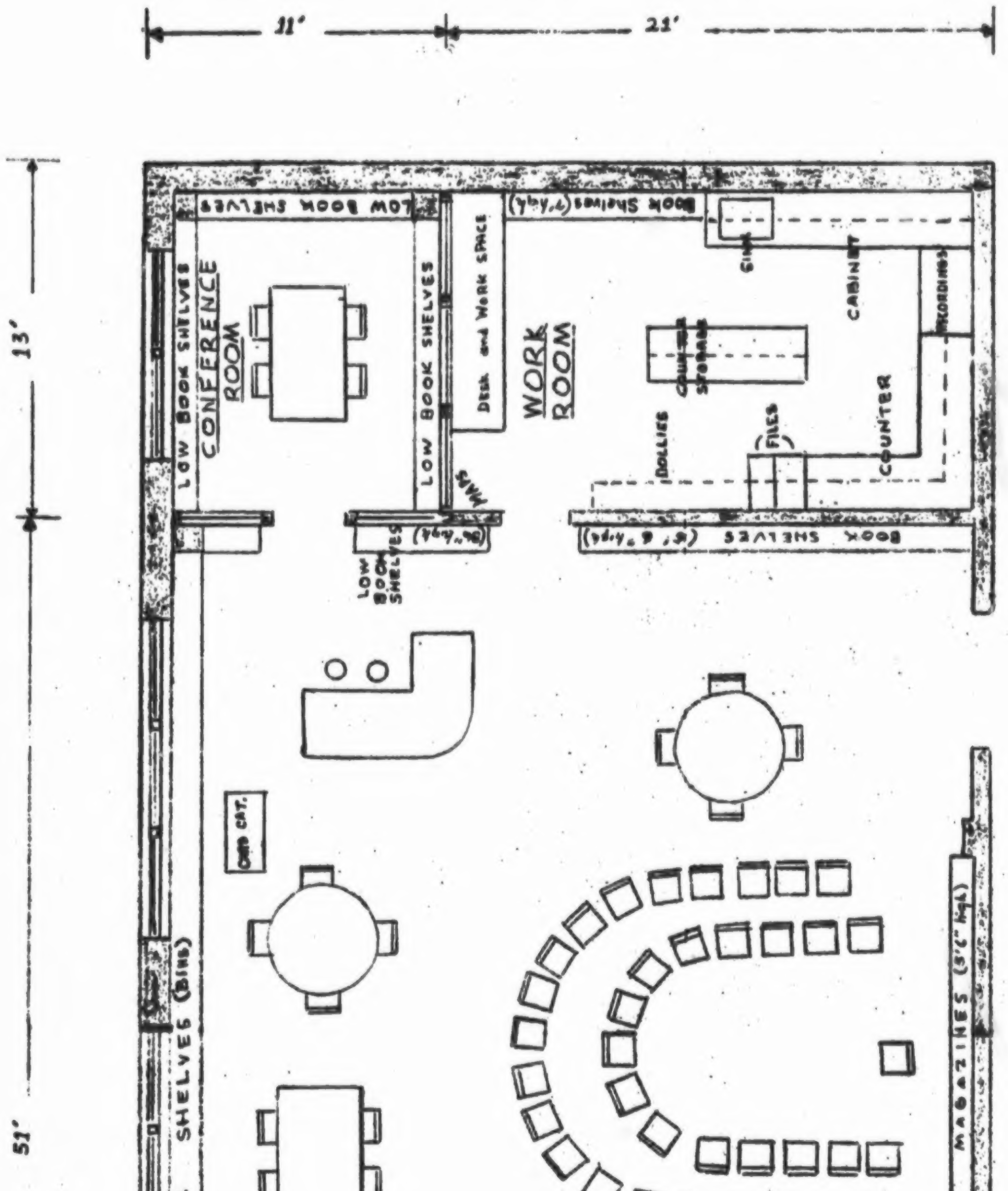
The easy book collection fills the north wall. The books are in picture-book-sized bins in low shelving. Windows with Venetian blinds and two small bulletin boards are above the section.

Nonfiction comprises five sections of standard-height shelving on the east wall. A large framed picture hangs above the shelves; small objects are placed at intervals to further stimulate interest in the books. Biographies — individual and collective — are kept in two sections on the south wall, near an entrance to the reading room. Fiction fills the eight sections on the west wall. Two large framed pictures are used to promote interest in the books.

Combination conference and reference room — 143 square feet

Nine sections of low shelving fill three sides of the combination conference and reference room, which is separated from the audio-visual-library workroom and the reading room by glass partitions. A huge bulletin board over the center section of shelves is reserved for use in promoting reference. Two walls of shelves are occupied by reference books and back issues of reference magazines. The third group of shelves is used for the return of books by class groups.

The reference room contains nine sets of encyclopedias. Latest editions are reserved for use in the library. Others may be checked out by individuals or classes on a daily basis — single volumes or sets. Mobile carts are available for transporting sets. Magazines and other reference books are circulated on the same basis. A table in the center of this room comfortably seats 4; 6 may use the room for a conference.


11'
21'
13'
51'
LOW BOOK SHELVES
CONFERENCE ROOM
LOW BOOK SHELVES
Desk and Work Space
WORK ROOM
Book Shelves (7' high)
SINK
CABINET
RECORDINGS
COUNTER STORAGE
DOLLIES
FILES
COUNTER
BOOK SHELVES (5' 6" high)
LOW BOOK SHELVES
CARD CAT.
LOW BOOK SHELVES (BINS)
MAGAZINES (5'6" high)
BOOKS
LOUNGE GROUP
LOW TABLE
END TABLE
BOOK SHELVES (5' 6" high)

M. R. Marsh, Architect & Engineer

Chantilly Elementary School
Floor plan

Combination audio-visual-workroom — 273 square feet

The combination audio-visual-workroom is small and used by many individuals. Every space is designated so that all facilities may be used as efficiently as possible. This room is thought of as being divided approximately into two L's. The library workroom area occupies the east portion, with the bottom part of the L facing the conference-reference room, and the audio-visual portion encompassing the west side.

No wall separates east from west, but a long, center counter helps to regulate the flow of traffic. This counter has a laminated top and is primarily for the use of the library assistants. About 6 inches below the counter top is an open space extending the length of the counter. This space is used for flat storage of library displays. On the east and west sides of the counter, extending almost its entire 6-foot length, are double-tilted recessed shelves, deep enough to hold a large science kit on the audio-visual side as well as other audio-visual materials.

Carts or dollies holding a movie projector, filmstrip machine, tape recorder, and a record player are stored against the wall in the audio-visual area near the door. Behind the door are the projection screens. Duplicate audio-visual equipment is kept in the primary wing, but its use is regulated through the library. Above the audio-visual equipment are cabinets containing back issues of magazines for teacher reference. Along the same wall, and adjacent to the machines, are two steel filing cabinets for the pamphlet collection, audio-visual information, library information, library lessons, bulletin board materials, and the like.

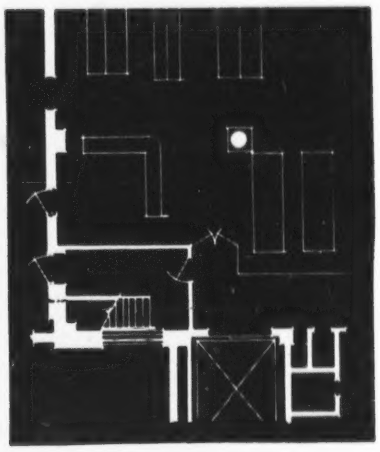
Next to the cabinets is an open storage area divided into narrow partitions for storing large standing charts, posters, and visual materials. Above the cabinets are shelves housing manuals of instruction for teachers. At this point a counter top is injected in a short L-shape. Below the counter top is an open space that permits the storage of the bioscope, mobile carts, extra filmstrip machines, and so on. On the laminated counter top are filmstrip previewers for single viewing and for small group viewing. Six electrical outlets are available in the area for previewing films, filmstrips, slides, and recordings.

The adjacent part of the L-shaped counter top contains the filmstrips and slide collection, housed in metal cabinets. File boxes are here for checking out all audio-visual materials. Above the counter are adjustable shelves containing professional books for teacher use; models of ear, eye, heart, and torso; a telescope; and other science materials. One shelf is reserved for films borrowed from the central audio-visual office.

The recordings cabinet, 6 feet by 2 1/2 feet, occupies the remainder of the audio-visual area, with partitions tall enough to accommodate 12-inch discs. The shelf above this cabinet is for visual material too large to be stored elsewhere. Cork is used on the top doors of the recording cabinet so that they may be utilized as a bulletin board. The audio-visual check-out sheet for scheduling machines is kept here, and a list of the films and transcriptions received that week. Other audio-visual information also is posted here.

The official library workroom area has counter-top-height cupboards and various-sized drawers for library supplies and visual instructional materials. Some of them are narrow — for material that gets lost in a deep drawer. The laminated counter top contains a sink with hot and cold water. There are two electrical outlets above the counter — a convenient place to use the electric stylus or to preview audio-visual material. Also above the counter are a small bulletin board and three rows of adjustable shelving for processing books. Directly behind this counter is the center counter, described previously.

Two sections of 7-foot-high, adjustable shelving almost fill the remainder of the east wall. The shelves are used for new books and professional library materials. The north wall of the library workroom area is made up of a counter-top desk with a dropped section for typing. The shelf list cabinet is conveniently adjacent with a large work area on either side. Drawers are designed and fashioned for specific library needs.



Hospital and Institution Libraries

Planning a Special Library in a Federal Office Building

MRS. ELAINE WOODRUFF
Librarian
U.S. Civil Service Commission
Washington, D.C.

Preliminary planning for the Civil Service Commission Library began in 1956, at the time requirements for space, floor covering, and other special features were submitted for the area of the building devoted to the library. By 1962, when construction began, a library consultant was called in to aid with a number of special problems. His assignment called for a survey of space requirements; a complete layout of the library including color coordination, equipment, and stack specifications; design of special equipment needed; and recommendations as to source of purchase.

In order to provide maximum information for the consultant, our previous outline of requirements was reviewed, and we prepared a formal statement describing our activities, collections, and all other factors which might influence the final design. We identified four areas which would affect the design.

The role of the Civil Service Commission as the central personnel agency of the government extends the library's responsibility for service to other agencies and organizations as well as to our own. The Commission is an older agency, established in 1883. It is forward-looking and yet proud of its background and traditions. Our first requirement was that the library represent the Commission, both in its color scheme and general decor and, if possible, in a special motif. Also, it was required that it be a reflection of the Civil Service Commission, not merely another new or "modern" library.

Within the Washington office our public consists of approximately 1,000 employees at the professional and technical grade levels which use the library services most consistently. However, any figures on seating capacity needed would have to be estimates, since the agency is separated into four buildings. Also, a great percentage makes use of our services by phone. Approximately 50 percent of the library's users are from outside the Commission. It is frequently necessary to collect and hold large stacks of material for these people, from which they may select and utilize only a few items.

Every year a number of outside researchers spend several weeks or even months in the library on personnel or civil service research projects. Study space away from the general flow of traffic is needed for them. An analysis of use patterns indicates that approximately 35 percent of the public are in the relatively short-term, "take-with" category; 10 percent come in to browse; 50 percent stay one or more entire days; and 5 percent stay as long as a month to six months.

The library's services

While all of the library's services are not unique, certain elements of each function affect design and space requirements. The way in which an activity is performed, rather than the volume of work, changes the situation from library to library. For example, in our reference work, materials for internal, regional, and interlibrary loans are selected directly from the shelves and sent to the circulation desk for shipping out, never impinging on the reference area at all.

The law and legislative reference section has traditionally had a separate entrance and its own reference and circulation system. Since its inquiries are quite distinct from general reference, this seemed a desirable arrangement to continue. At the same time, a new arrangement was needed whereby telephones and desks in this area could simultaneously be covered by other staff members without special assignment.

While some circulation records are needed by the reference librarians, the long-term, project, and interlibrary loan files are referred to less frequently. Eliminating these activities left only the "take-with" charging that needed to be performed there.

The library is responsible for distribution of Congressional bills, hearings, reports, and public laws — a space-consuming, large-scale shipping operation. While this function is better out of the public area, the same materials are requested frequently in person and must be readily accessible to the law staff.

A major activity of the staff is the preparation of bibliographies and other research publications, on a daily, monthly, or annual basis. Special space must be provided away from the public area for assembling and distributing these publications.

The library's collections

The library has four separate book and pamphlet collections, in addition to the periodicals collection. Most important is the personnel management clearinghouse, a carefully selected and separately classified collection of 32,000 items. It needs to be maintained as a unit, yet adjacent to the general reference collections of 30,000 volumes.

The law and legislative reference collection numbers approximately 18,000; it is considered a separate entity although it may be used in general reference. A small but unique collection of materials on civil service history is also part of the library. Now housed in file cabinets, some other type of storage system was desirable.

Other factors affecting stack space requirements were the cataloging of all pamphlets instead of housing them in vertical files, thus invalidating the measurements of volumes per linear feet; a completely open stack policy eliminating the need for partitions and closed areas; and a predetermined weeding policy which limited the size of the collection and made usual estimates of growth rate meaningless. However, since this policy could be subject to change, some expansion space needed to be provided.

Private office space for the librarian and her secretary was needed, consistent with the usual government space policies in this respect. Since the secretary is also responsible for supervision of mail distribution, these offices were to be close to the mail entrance without being in the main flow of traffic. Conference space for groups as large as 20 was planned since foreign visitor groups, students, and various training groups meet in the library. A mail and distribution unit was required for handling a great variety of duties. While the unit was accessible to the reference staff, a separate entrance was desirable, close to the technical processes area. Adequate work space for 6 was needed in the technical processes area, with shelf space for sorting new acquisitions and with consideration for functional relationships.

The library plan

Early in the planning, the library had been allocated centrally located space on the fifth floor of the Commission's building — the floor which also housed prime users, such as the executive, administrative, and legal offices. After two decades in a first-floor location with its heavy volume of walk-in traffic unrelated to the library's main function, top-floor space seemed very desirable. The library faces north, with one windowed wall and more than adequate recessed lighting. Floor weight has been increased to 150 pounds per square foot in this and in an adjacent area for further expansion. The general plan is in the shape of an L, with administrative and technical functions in the shorter portion. The entire building is designed on 5-foot modules with lighting similarly arranged. The flooring, selected for appearance and sound control, is cork tile. The law and general reference areas each have their own entrance, and the general mail area, history-conference room, and librarian's office open off another corridor, the L-shape making this arrangement feasible.

The space outlay is as follows: public area including stacks, reading areas, reference desks, lobby, catalog, and so on, 8,000 square feet; technical processes, mail, and so on, 1,400 square feet; offices, 400 square feet; history-conference room (including space for stack expansion or exhibit space), 700 square feet; a total of 10,500 square feet.

The major color scheme is a modern vivid blue and green in the rugs and reading chairs, but toned down by the more traditional walnut in all other equipment. Accent touches of black and white carry out the modern effect. Stacks are unit-type metal in a bayberry shade.

The motif and principal decorative scheme will be carried out in a semitransparent screen arrangement separating the entrance area from the reference area. The Commission's seal or other significant detail will be incorporated into this arrangement with modern exhibit cases holding other historical objects of interest. Glass doors and a partial glass wall make the lobby area open in appearance. Tables are 42 inches by 60 inches, with 2 readers planned per table. Total seating space, including 10 carrels in the stacks, is 35. Coat racks are built into the stacks for outside users.

The circulation desk has been removed to the mail—shipping room, where most material comes in and goes out again. It is connected with the reference section by an intercom. Books returned in person will be received on a truck at the reference desks and moved back at intervals for discharging and shelving. A small area enclosed by document-type stacks for bills and other documents opens off the law section for purposes of document distribution. It is equally accessible for immediate use when needed.

The arrangement of stacks is such that the law and legislative reference area occupies the section of the library to one side of the lobby, the personnel management clearinghouse is situated in one quarter of the remaining area near the windows, and the general and periodicals collection adjoins it. A reading area runs through the center of the library adjacent to all stacks, while the main pattern of traffic is on the outskirts of the stacks.

The combination history-conference-study room is off the separate corridor so that groups can be seated and conferences held here without disturbing readers in the library. It includes 7 closed stacks of document-type shelving and 12 open stacks for historical materials, controlled by the librarian's and secretary's offices. Plans call for eventual display of historical materials and exhibits in this room as well.

The technical processes area adjoins the mail-shipping area for convenience in receiving incoming materials and sending out completed items. A long counter-top file section at one end provides work space in addition to unit-type desks and shelf space beside each desk.

In conclusion, the problems involved in planning a library in a government building are no different than those in any other office building. If the librarian is given an opportunity to express special needs early in the planning, if these needs are reasonably met, if provision is made for changes and modifications as conditions change — then the end result should meet the goals set.

The Pursuit of Flexibility

HELEN CRAWFORD
Librarian
University of Wisconsin Medical Library
Madison, Wisconsin

When it comes to building planning, most of us are theorists—theorists of more or less sophistication, depending on the number of building institutes we have attended, the number of buildings we have inspected, and the amount of reading we have done—and not deserving the degree in practical planning until our buildings have been erected and exposed to the criticism of our colleagues. Since our building is still in the planning state, I shall be concerned more with the initial stages of planning than with detailed layouts and mechanical features.

To begin with, my advice is to measure everything measurable and count everything countable, as a preliminary to a program. The books and chairs are easy to count; the space is not. The book collection, seating, and work, service, and other space may be categorized quite broadly or broken down. In the special library, bound journals, atlases, and pamphlets or materials such as music or documents have different space requirements. The currency of the collection, policies of discarding and storage, and the function of the library as a resource collection or a current working tool must be established with consideration given to policy changes.

The most difficult but the most important space to measure, to project, and to equip is the work area. Books can be removed to storage in distant corners; readers can be dispersed throughout the library wherever the books are; but much of the usefulness of the staff is lost if it is too scattered for easy communication and supervision. The initial work space needs to be adequate for almost the life of the building.

The program

With all the talk about library programs, all the building institutes, the visits to new libraries, and the gleeful appropriation of other people's best ideas, it is a source of continual amazement how many additions and buildings are planned with little in the way of a written program. The basic principle is: If you want a sink in your workroom, if you don't want traffic to trickle through your back door, if you are tired of a fragmented library and a scattered work force, *put it in writing*. Oral directions can be forgotten or ignored.

There is no one best program; programs are written to meet needs, to clarify the library staff's objectives, to inform the hesitant administration, to instruct the inexperienced committee, to persuade the reluctant donor. The first program may well focus chiefly on the need, with emphasis on the horrendous conditions under which one works. Attention should also be given to how much the service could be improved with better accommodations.

The second program is likely to be expanded to answer criticisms and misunderstanding of the first. The amount of detail on library organization, library activity, and library philosophy will depend on the sophistication of the library committee and the architect. Space relationships are an important element: entrances, elevators, traffic patterns, contiguity of related functions. Growth statistics of book collections, clientele, and staff are essential. One or more tables projecting growth of the collections on the basis of rate of increase in the past are instructive. If there is any question of discarding or storing part of the collection on the basis of age, it is helpful to calculate what percentage of the collection will be less than twenty-five or thirty years old at ten years from occupancy of the building. Such is the exponential curve of publication in science that 70 percent of a technical collection may fall within the thirty-year span.

No one has developed a convincing formula for the percentage of one's clientele for which seats must be planned. For example, no library can really predict how a new, and probably air-conditioned, building is going to affect its occupancy. The best that can be done is to assemble from all the departments concerned their best estimates of students and staff to be accommodated, now and in the future. In our case, the projected student body of the School of Nursing was raised nearly 70 percent in the two years between the original and the revised program.

The usual formula for seating space is 25 square feet per person in a reading room. Thirty feet is a good average to accommodate carrels, studies, and other individual reading spaces. The large study table probably has little advantage over the smaller table when one applies a modification of Parkinson's law: "The reader and his books expand to occupy the space available."

Some basic formulas have worked quite well for libraries all over the country. However, formulas can strangle as well as support. Your best defense is your yardstick. If your measuring tells you that your journal collection takes half again as much space as the accustomed formulas, do not be belabored into setting your capacity at the lower figure.

Planning for flexibility

The flexibility of a library is determined by its most rigid components: entrance and exits, elevator shaft, plumbing, and stair wells. There is also something monolithic about a great collection of books, particularly when they average—as bound medical journals do—nearly four pounds per volume. Although some adjustment can be made in opening or closing stack areas, only urgent necessity is likely to dictate relocation of the basic book collection.

Interspersing books and readers is of dubious value in a scientific collection with open shelves. Seating reasonably near a journal collection does, however, serve a physiological function—the volumes are too heavy to carry far. There is very little browsing in a collection of bound journals.

Flexibility is marked by openness, including openness of mind. Ask of every function, "Does this really require a separate room?" There is the reverse consideration—privacy can promote efficiency. The answer would seem to be generous use of readily shifted work units, shelving, and movable partitions. The movable partition has come a long way in the past few years in sound control, attractiveness, and ease of manipulation.

Privacy should also be provided at the circulation and reference desks. The publicity we sometimes give to our patrons' private affairs is irritating to other readers. An office where the circulation librarian can telephone in quiet is essential; it might also include the cases for books that even a medical library must lock up.

The initial administrative structure should be kept as simple as possible; growth in complexity with increase in size is a law of nature. The secretary who cannot run the duplicator on another floor because she has to stay by the telephone, or the acquisitions librarian who has to go any great distance to use either the *Cumulative Book Index* or the card catalog, cannot make efficient use of time. If horizontal continuity is not possible because the site is small, placement of stair wells and elevators should speed vertical access. Also, an efficient communications system can reduce traffic between departments.

Dividers

Built-in furniture may serve as a perpetual monument to one's errors in judgment. The card catalog itself is a good divider, and a built-in catalog not only constricts its growth but creates a permanent wall against change. The circulation desk, built in at great cost, is often as elegantly contrived as a medieval tomb, and just about as flexible. The sectional desk is an improvement, but what about a shell with a counter of varying widths, movable files, shelving, desks, and truck space underneath?

The memorial room, whether it be a browsing area, a rare books room, or a board room, beautifully paneled and expensively furnished, can freeze valuable space that may be used infrequently unless it is assigned a double function. The cost of decor is often in inverse relationship to the amount of use an area receives, though the prestige value cannot be entirely ignored. Multipurpose rooms can contribute to flexibility. The library classroom can be used as a seminar for other classes and for staff meetings. The audio-visual room can have typing cubicles as well as listening booths.

The necessity for openness of mind has been mentioned. However, there is a time for compromise and a time for stubbornness when real issues of efficiency and service are involved. The librarian should not be driven into the position of accepting an inadequate building. It is easy, by the use of a suitable formula, to make a 100,000-volume building hold 200,000, until one tries to get the 100,001st book on the shelf.

Flexibility is a concept possible only to a library with excess space beyond its current needs. When a building is full, only the moving of everything closer together will release the tension. Usually the function with the greatest outward pressure to the square inch wins over the "soft" functions, and the book collection flows into any area not barricaded against it. Many times we accede too easily to the current fad for the flexible library, discarding the compact and spacious multitier stack. It still remains an excellent way to keep the most books closest to the reader.

Quantitative flexibility implies as much room in the initial building for growth of all components of the program as the total usable space allows. This should assure expansion space for future growth and make provision for some unassigned space. Qualitative flexibility is concerned with changes which are, basically, beyond the power of the librarian to predict or control: changes in direction of the subject field, development of interdisciplinary areas, depth of coverage, size and character of the clientele, expenditures for books and for staff—in fact, most institutional decisions.

The librarian must also be prepared for some changes in function. If book losses are high, close control of the exit by a turnstile may be necessary. If the new building attracts too many readers from other parts of the campus, monitoring may be necessary. Tighter or easier rules on circulation can change the load at the circulation desk. For these reasons, the entrance area should not be tightly planned and the circulation desk, as suggested, be kept as adaptable as possible.

Technical changes

The librarian must keep in mind the certainty that changes in technology will affect the kind of library plant he should have in the next few decades. The development of the Medlars (Medical Literature Analysis and Retrieval System) indexing project alone assures that the major bibliographical effort will be centralized, with some type of regional distribution of the computer tapes to reduce the pressure on the National Library of Medicine for reference service. Providing the book and journal resources will be the responsibility of the local library, and the responsibility will increase with the expanded coverage of the index. But we clearly shall have to expect a rise in the growth curve of our collections. We can also be sure that the astronomical cost problem of retrospective indexing will leave to us the responsibility for maintaining the collections of pre-Medlars materials. Photocopying reduces, but does not eliminate, the need for duplication to serve an ever increasing number of research workers. All this means that our estimates of space for books and journals are likely to be low; that our collections are likely to double in less than the twelve to fifteen years that our present curves predict.

If one plans on storage of part of the collection, one must be sure that the storage space will be adequate, accessible, and efficient. If one hopes that machines will take over some of the processing, one must still allow space for the machines and required personnel and acquire the funds to support them.

Every plan should allow some scope for experimentation. There is a surprising pressure to conformity when the organizational structure does not follow the usual pattern. And this pressure is not confined to nonprofessionals; it is sometimes strongest from librarians who apparently equate nonconformity with inefficiency. Interdepartmental experimentation should be encouraged by not insulating departments from one another by too many permanent walls.

In conclusion, I would like to make a few condensed observations on the basis of numerous visits to libraries, new and old:

The planner's best friend is the yardstick.
Libraries, in general, can be planned from formulas; a particular library must be custom-made.
The low bookcase may be easy to see over, but it is hard to see into.
Some chairs must be sat in to be believed.
People, like books, come in different sizes.
The weaknesses of the old library can be guessed from the care with which certain areas of the new are planned.
Book and seating space are easy to justify; work space must be fought for.
Privacy can be productive.
Traffic aisles can be encroached on; corridors cannot.
Corridors and closed doors repel. If you want a friendly library, keep it open.
Will the reader know he is entering a library the minute he enters the door?
Build in furniture and you build in obsolescence.
Concede unimportant points graciously in order to be firm when it matters.
It helps to have the authorities on your side, but they do not know your library.

Mobilizing for a Reasonable Future

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Preliminary planning for a library to be located in a building for primarily other uses presents a somewhat unique problem. Unlike public and university libraries which plan new buildings for about twenty years, many special libraries have no consistent rate of growth. Some special libraries have been known to outgrow new quarters within three years. Unlike public and university libraries, many occupy extremely high rental space. Preparing for the future has an extralarge dollar sign hanging over it. This combination of difficulties, inestimable growth plus the high value of floor space, often leads to future uneconomical solutions.

Suddenly the library may reap a harvest of books that overflows your accommodations and you need more space. Often another department nearby is moved to another location to provide this room, but this additional space was more than likely designed for other uses.

For library stackrooms, the New York City code insists upon floors designed for a load of 120 pounds per square foot. By comparison, floors used for office purposes may be designed for 50 pounds per square foot, and private and ward rooms in hospitals for only 40 pounds per square foot.

Suppose there are five 9-foot ranges of double-faced stack in your original library, and that an equal amount needs to be added in the extra space. The present stacks may possibly be spaced 4½ feet apart on centers. But to avoid exceeding the floor load of 50 pounds per square foot in the new quarters, the stacks will now have to be spaced much wider apart—10.8 feet on centers. The old stack occupies a space 9 feet x 22½ feet or 202½ square feet, while the new stack will occupy a space 9 feet x 54 feet or 486 square feet.

Thus, 283½ more square feet of floor space would be used for the same book capacity. Translating that into dollars may mean that the organization is losing $1,559.25 per year, which represents the rental for equivalent office space. Multiply that by the number of years the space is used, and there is an impressive sum.

Is there a solution? There is the possibility of designing some adjacent floor areas for heavier loads, but this will depend upon the type of construction used in the building and the sizes of the space in question. Also, this would have to be weighed against the risk of future expansion.

Some Random Thoughts While Thinking about Library Planning

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If this were a book and the time were the seventeenth century, the title page might read: "Random thoughts while thinking about planning a library, or discourses on such diverse matters as how to remodel a library in an existing building devoted primarily to other uses, and the problems appertaining thereunto, with many sound and serious suggestions for the organization of human knowledge and the consequent betterment of society at large, with further disquisitions on librarians' follies, fanciful and otherwise, and further illustrating how not to impede a presentation with pedestrian and pedagogical pontifications of precursive scriveners, the whole dedicated ad quem et a quo, to the high and mighty scholars and the low and neglected undergrad, Esq."

Many of you are members of the Association of Hospital and Institution Libraries, so first I shall think about adapting other space to library use. I assume you have done some reading before you start to remodel. Recommended are Ralph Ellsworth's *Planning the College and University Library Building*[1] and Keith Dom's *Guidelines for Library Planners*,[2] among others. The best article in this particular field is by Catherine Kennedy, "Mayo Clinic Library: An Experience in Remodeling and Expansion," in the *Bulletin of the Medical Library Association*.[3]

Early steps

The beginning steps when you are faced with this problem are fairly orderly. First, resign. You should have been given a new library. If the resignation is not accepted, the second step is to investigate the floor load capacity. Although Ellsworth gives the live-bearing load of floors in a modular building as 150 pounds, noting that it will be sufficient for compact storage, it would seem that about 100 pounds to the square foot would be adequate.

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[1] Ralph Ellsworth, *Planning the College and University Library Building* (Boulder, Colo.: Pruett Pr., 1960).

[2] Keith Doms and Howard Rovelstad, eds., *Guidelines for Library Planners* (Chicago: American Library Association, 1960).

[3] Catherine Kennedy and T. Keys, "Mayo Clinic Library: An Experience in Remodeling and Expansion," *Bulletin of the Medical Library Association*, 46:249-69 (Apr. 1958).

If the floor test is passed, the next step is to investigate if the walls are bearing walls or if they are movable. If they can be torn down, they might simplify the problem; if not, they might complicate it.

The last chance to avoid the job is presented by the fire laws and building codes of your community. They are usually complex, and an expert should find the answers. He will have to answer such questions as how many people may occupy the room or rooms, can a fire exit be provided, will the doors open outward, are any zoning laws relevant, or will internal stairs support an added load. If you have come this far, there is nothing to do but go to work. It is assumed that the problem of a new library vs. old space has been answered, and the problems of satisfactory location have been settled.

The planning program should now be written, just as for a new library, but it need be nothing so elaborate. Assuming that the library to occupy the space you are planning for it is already in existence and functioning, you should be able to have fairly exact figures for your functions. Of course, everything will be bigger than it was, but there will be a base for your calculations for the various areas desired.

Since it is almost impossible to put an elevator in an old building where there is none, you may have to compromise with a booklift. Do not forget conduits for phones or special communication. When the stacks are located, be careful how the alphabet runs.

Plan for as many electrical outlets as possible, but be careful where the light switches are relocated. Try to place two or three automatic switches at the entrance which will turn off all electricity except the clocks, the exit lights, and the staff refrigerator. Also, investigate the janitor's power needs and those for your microfilming or other equipment.

Mathematical curves

Dear to the hearts of librarians, planners, and architects are mathematical curves. Many times the librarian will claim to have extrapolated from current demands to future needs when what he has done is to take someone else's figures, from probably quite different circumstances, and make a "guesstimate."

The ogival curve is similar to the population curve. In biology, any population grows until it runs out of space or food. Application: a library grows until it runs out of space or money.

The asymptotic curve, if plotted on a time and use graph, approaches the base line, or use line, but does not touch it at infinity. Our volumes decrease in use as time passes, until they are near that base line, at which time they should be discarded. This can be done in two ways. In library planning place the older books farther and farther from the useful part of the library, as has been done at the new Harvard Medical Library. Or, discard most books when they reach a certain age.

A beautiful example of this curve is given in the *Survey of the Interlibrary Loan Operation of the National Library of Medicine*, by William Kurth.[4] It is important to note that this curve comes from the most demanded 250 serial titles. With the base year of 1959 and an index of 100, by 1900—or sixty years back—the index had declined to 1.78 percent. Obviously there is a decay rate for books, and most of them are completely inert, or inactive, in a very short time.

Let us get back to planning again. Maybe we should rewrite the dictum, "Form follows function." The least formidable part of library planning is taking care of the known factors, the experienced functions of the library, such as its space requirements, its flow patterns, its present interactions. The difficult part is planning for the unknown, the unapprehended, the future, even the immediate future. It is difficult to find a new plan with prophecy and purpose. Perhaps we should substitute for "Form follows function," "Form follows imagination." And, rather paradoxically, let it be said, "Form follows the future."

The statement does have meaning. Any art (capitalized or not) is usually considered bad if it repeats the past. Great art is the creation of something new, bringing into existence something that, before the act, did not exist. It is giving form to that which was formless. It is creation, and we hope to be creative with our new libraries. We are, whether creating art or not, trying to make "form follow the future."

The working together of the librarian, the consultant, and the architect is for the purpose of creating a new library. Possibly the librarian knows best the present; the consultant, the possible future built on that present; the architect must give this fact and dream a creative form.

The consultant

When advice is given to hire a consultant, he is usually mentioned in the singular, as "one" consultant. What is wrong with two or three? Ellsworth mentions this fact in his book, *Planning the College and University Library Building*.[5] It is difficult to imagine two or three consultants on a million-dollar-plus building not earning their cost, and there is a high percentage chance that they will do a great deal more.

But it is difficult to agree with Ellsworth's suggestion, "Under no circumstances should one choose a consultant who has done fewer than three successful buildings, either alone or as part of a team."[6] A librarian entrusted with a new building, and being successful with it, will probably already have fifteen years in the library field, and it would take at least seven years for each of the three libraries. By then he is an old man. Maybe the reason so many libraries have failed to last into even the very near future is because they have been planned by the more conservative, older men.

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[4] William Kurth, *Survey of the Interlibrary Loan Operation of the National Library of Medicine* (Washington, D.C.: Public Health Service, 1962).

[5] Ralph Ellsworth, *op. cit.*, p.24

The same holds true for the architect. By the very fact of costing more than a million dollars, a large library falls into the hands of an older, established, more reliable firm, and, again on a percentage basis, you get a conservative architect. As to specific planning, there is an unfortunate tendency to neglect the work that has been done in our field, that of the health sciences or medical center library. Within the last ten years there have been several pertinent articles in the *Bulletin of the Medical Library Association.*[7]

The rest of this talk is devoted to an attack on the idea that we must keep building bigger and bigger libraries or, at least, keep putting more and more books in them.

Knapp study

Aren't we, as librarians, mummified in a printed desert of paper trash in which only a few oases break the useless landscape? Listen to this: Patricia Knapp's monograph, *College Teaching and the College Library,*[8] is the latest study of the use of library books. She studied Knox College. The library held 79,144 volumes and was a good library. More than 90 percent of the loans were for course purposes. Two thirds of the loans were from the reserve collection. And—most important—everything was taken care of by 5,000 titles. Only about one sixteenth of the collection was oasis. Of the rest, "boundless and bare / The lone and level sands stretch far away."

We are aware enough that storage is one of the library planner's biggest problems. We speak of the need for flexibility, and we seek to avoid the central core stack, or a large indigestible mass of stacks. But we have missed the point. It is not the stacks that are indigestible, but the books that go on them. In other words, there is nothing wrong with our stacks except the way we treat them.

It seems that all plans presented, year after year, call for bigger stack areas. Such plans are invariably accompanied by the self-contradictory illusion that while the libraries get bigger and bigger, the book and the reader are getting closer and closer together. When you blow up a balloon, you are—at the uninflated start—in contact with a relatively large part of its surface. But as the balloon gets bigger and bigger, you are less and less in contact.

Now one answer to successful planning would be to have all the money you could possibly use. This won't bring the reader and the useful book together when the needed book is one among hundreds of thousands of relatively worthless, if not completely worthless, books. Space might seem to be the answer, but in this context space is a function of money, so space just defers the problem.

This writer once wrote that 90 percent of the problems of successful library planning can be summed up in one word: "Space." Well, 90 percent of these problems may be solved by the application of one word: *"Discard!"* Of course, all this has been said before. The introduction to a medical book in my library starts off: "There is nothing in this book that has not been said at least 500 times before—but nobody seems to listen."

The architect cannot solve the problem. It is not his business. The college president cannot solve it, because he is caught in a competitive situation and a need for grants. The students cannot solve it—they are in the position of "vexation without representation." In short, though the librarian may be caught in a status-symbol bind and a Parkinsonian web, he is the only man who can solve the problem.

Perhaps the answer lies in the already existing regional library plan. Perhaps it lies in greater use of microfilm—something quite feasible since the introduction of the reader-printer. Perhaps the answer is to be found in such libraries as the Lamont Library at Harvard. Certainly the Princeton plan, with a central library and about a dozen libraries at other places, has a great deal to be said for it. Maybe the teaching machines will help. Programming them calls for a very careful assessment of useful knowledge, and minds trained on that kind of diet could very well learn to reject the trash.

Discard program

But the one answer we have available right now, at no added expense to speak of, is a workable and working discard program. Let us try to devise some working rules. One would be that the circulation, exclusive of reserve, must at least equal the holdings, or vice versa. Set up a traveling fund, out of the money saved by discarding, by not building new libraries, and by not buying in the first place, to be used to send the sometime scholar to a large storage library to continue his work.

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[6] *Ibid.*

[7] Alfred Brandon, "Space Management and Layout," *BMLA*, 49:523-30 (Oct. 1961).

Carl W. Condit, "The Building Arts in the Service of the Librarianship," *BMLA*, 50:167-76 (Apr. 1962).

Lora F. Davis, "Instructions for a Medical School Library Planning Survey," *BMLA*, 41:273-76 (July 1953).

Alderson Fry, "Medical Library Architecture in the Past Fifty Years," *BMLA*, 45:471-79 (Oct. 1957).

—— "Plan and Equipment of the Health Sciences Library, University of Washington," *BMLA*, 49:21-31 (Jan. 1953).

—— "Planning the Medium-Size Library for the Computer," *BMLA*, 51:211-13 (Apr. 1963).

—— and others, "Planning a Better Medical School Library: A Panel Discussion," *BMLA*, 49:187-206 (Apr. 1961).

[8] Patricia B. Knapp, *College Teaching and the College Library* (Chicago: American Library Association, 1959).

Since the retiring librarian is a knowledgeable person, hire him to do your discarding. Select three or four thousand books in a given subject field for possible discard. Invite the faculty and graduate students in that field to come help themselves. Then, as they leave the library, take the books they have selected away from them. Now you have the books judged best by competent persons. Return these to the shelves for keeping and remove those that were left behind, that no one wanted.

The administration could make the library pay $5 back into the general fund for every book more than fifty years old that it keeps. Discards made before a book was twenty-five years old would be good for a $5 credit. Or (and this isn't a bad idea at all) if the main library operates with department funds, after a book is, say, twenty-five years old, give those in charge of the departmental fund the privilege of either discarding the book or paying the main library out of departmental funds $5 for every book kept beyond that period. That will force a judgment on lots of worthless books. If the librarian will only get concerned enough or worried enough, he might get mad enough "to blow his stack."

A Pharmaceutical Library—The Planning Stages and Six Years of Use

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The problems of planning a new industrial library are not unique; rather, they have many points of similarity with plans for a public, college, or university library. Details may differ, particularly in matters relating to size and to the facilities needed for specialized services, but there remain fundamental principles to be followed in any case.

Basically any new library should meet the following specifications: (1) there must be adequate room to house the collection and to allow for growth; (2) suitable areas for readers need to be provided; and (3) adequate space for the staff to work needs to be supplied.

Though the basic requirements apply to all libraries, the industrial library may have to cope with some special problems. Generally speaking, such libraries are not housed in separate library buildings, so that the problems of both adequate and suitable space may assume serious proportions. And in the average special library there are apt to be specialized services, such as patent abstracting or medical indexing, in addition to the usual routine library procedures which make the problem of staff work space more difficult.

Serving a specialized clientele can easily create planning problems because of the variety of ideas as to the best methods to pursue, but the juxtaposition of opposing ideas, if honestly met, offers a good basis for creative effort. With this background statement, what were the problems of the Upjohn Company Library, how did we meet them in planning the new library, and how well has our planning met the test of use during the past six years?

History

The Upjohn Company Library had been formally in existence under the direction of a professional librarian since 1941. It was first organized as a service to research personnel, but rapidly developed into a company-wide library. During these years there was one exception to this general statement; that is, there was a separate law library in the Legal Division. Also, in 1961, a new administration building was erected. At that time a separate business library was organized, and a member of the professional staff of the research library was transferred to this new location. However, in both cases all acquisitions and technical processing were, and still are, handled by the personnel in the research library.

After World War II, the company, having outgrown its original quarters, decided to move its production operations to new and expanded facilities, and to this end a series of new buildings were constructed about five miles from the former location. The Research Division then expanded into the building which had formerly housed the entire company. By 1950, when plans were underway for the new production plant, this library had been outgrown. The collection had grown from 6,000 to 25,000 and the staff from 1 to 13.

Location and space

Thus, our first problem was location. In 1936, when the building was erected, all of the research divisions were located in what was known as the Research Tower—Floors 7-13 of the building. The library was housed on the seventh floor, or the first floor of the tower, where the floor space was considerably less than it was on Floors 1-6. The Research Division, or Scientific Administration as it is now called, would expand into all thirteen floors, and the problem was whether to move the library to another floor where more space was available, or to let it remain on the seventh floor which would locate it in the center of all research activity. Research personnel were polled, and after considerable discussion it was decided to leave the library in its former location. Being assigned to the seventh floor did not solve the library's space problems since there was very little room for expansion on this first floor of the tower.

After consultation with the company engineers we found that it would be possible to build up two additional floors above the sixth floor. This would reduce the tower to five floors but would increase the size of the seventh and eighth floors considerably, giving the library a stack room of 40 feet x 68 feet and a search or study area of 24 feet x 48 feet.

The industrial librarian is usually not concerned with a new building, but is involved in utilizing the space assigned to him in an older structure. Blank floor plans were supplied to us, and we began to lay out a library to scale. We gave the following areas priority consideration:

1. Sufficient and convenient space to serve our clientele and for the researcher to work
2. Adequate working space for the staff; we felt this should include private offices for each professional member of the staff with an arrangement which would facilitate efficiency in work flow among staff members

3. Space, in addition to the card catalog, to house the Medical Literature Index, the Patent Index, the Internal Research Reports Index, and other indexes prepared by our staff
4. Convenient and adequate housing for the collection with room for at least ten years' growth

At this point management appointed a library committee made up of a representative of each major department to work with us in making plans. This committee met weekly and was invaluable in helping us see the point of view of the user.

The reading room, which includes all reference and circulation services plus the offices, is located on the site of the old library—an area of approximately 6,000 square feet. The stackroom adjacent to the reading room and the search room comprises the new sections built on the roof of the sixth floor of the building, adding approximately 4,000 square feet. In the older area, one side was blocked off into offices for the library staff by the use of Hauserman partitions. Librarians need suitable working quarters in order to accomplish the professional work required of them. Small but adequate offices for each member of the professional staff and a convenient workroom for the clerical staff were planned. Several of these offices opened directly into the reading room to ensure quick accessibility to reference tools and patrons.

Then began the layout of the library proper. Our space allotment included a stack area, search or study room, and reading room. The reading room was planned to facilitate study, with easy access to the bookstacks, the circulation desk, and the reference collection. At one side of the reading room three small rooms, created by Hauserman partitions, housed a duplicating machine for the use of research personnel, a conference room with telephone, and microfilm and microfilm readers.

The need to locate the current and bound journals in the proximity of their indexing tools was given serious attention. The current and unbound journals are shelved in the reading room near study tables, while all bound journals are shelved in the stackroom just adjacent to the reading room.

Equipment and furnishings

Shelving for the stack area was the largest single item purchased. For quick reference each range was equipped with a standing-height sliding shelf, and drop shelves with chairs were placed at the ends of several of the ranges. Carrels were installed at each end of the stackroom for more extensive study. The periodicals shelving displays the current issue on a sloping movable shelf that allows for storage behind; it is expensive and a space consumer, but it is extremely useful.

The study tables and carrels are all built to a special size—4 feet x 3 feet. They are large enough to allow a reader to spread out his work conveniently, but not large enough to be used by more than one person. For ease in use, the tables are without aprons and the chairs without arms. The standing-height charging desk has some special features. For example, its telephone is recessed but stands on a sliding shelf for easy use.

Furnishing the search room depended upon a number of factors. It was necessary to decide which indexing tools were to be housed there and which were to be left in the reading room. Since literature searches were predominantly chemical in nature, the search room was planned for just chemical indexes. For *Chemical Abstracts* we purchased what has since become known as a Chemical Abstracts bar, and for the remainder, standing-height, double-faced shelving with sloping tops. Eight large carrels for study complete the furnishings for the search room.

All of the furniture for the library is birch. The floor is covered in a terra-cotta rubber tile, and the chairs are upholstered in green, red, and blue leather. The woodwork was refinished to match the birch furniture, and the walls of the Hauserman partitions were completed in a contrasting green.

Moving

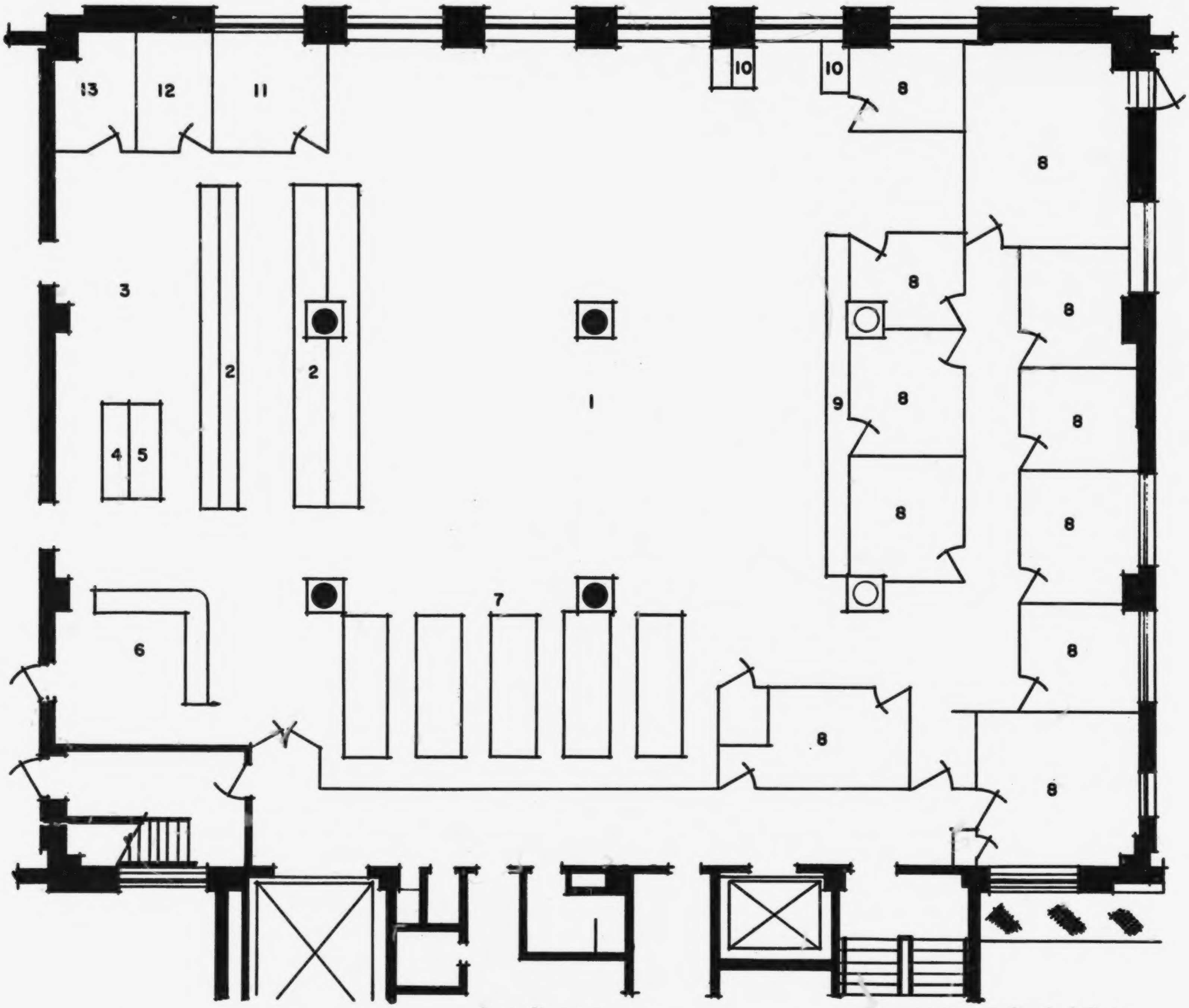
The desire to give continuous service while transferring the collection from one location to another created a series of problems all its own. Our situation was complicated by the fact that more than half of the space allotted to the new library was already in use as the old library.

During this period the entire book and periodicals collection was measured. On the basis of the past ten years the amount of space needed for the next ten years was estimated. This information was entered on cards, arranged in shelf list order, and later put in list form. When M-day came, we were able to move the collection to its present location with very little interruption in service.

During the period when the old library was being remodeled, six members of the staff who could carry on their work outside the library were moved elsewhere. The reference desk was installed in one corner of the stackroom, and the remainder of the staff worked in what is now the search room. When the remodeling was finished, we moved back into the reading room without any interruption in service.

Recapitulation

How well has the Upjohn Company Library been able to function in the library as planned and occupied since late 1957? The first item to consider is the matter of space. We allowed for a normal ten-



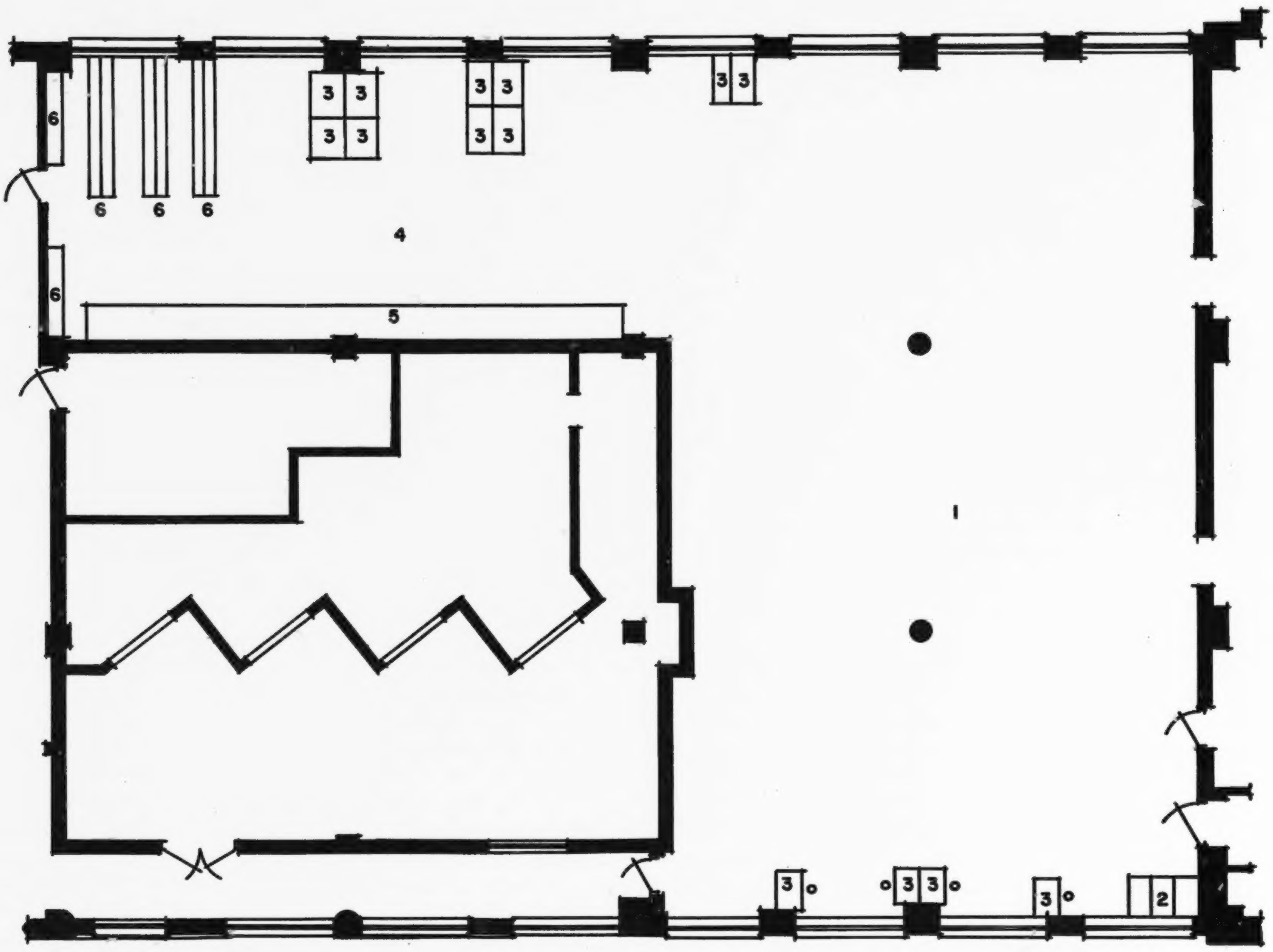
Upjohn Company
Pharmaceutical Library
Reading area

1 reading room
2 miscellaneous indexing tools; trade catalogs and drug information
3 reference alcove
4 Medical Abstract index
5 card index
6 reference and circulation desk
7 current periodical shelves
8 library offices
9 patent files and index
10 research report files and index
11 conference room
12 dark room for reading machines
13 Cormac room

year growth, which is about average for an industrial library. In moving the collection we left two shelves in each section vacant to allow for new additions.

In planning for growth we took into consideration that the period of the library's greatest expansion was already in the past—at the time the new library was being planned. In 1941, when the professional organization began, there were about 6,000 volumes in the collection. In late 1957 there were approximately 29,000 volumes in the library. During this period the periodicals collection had been systematically built up so that the library had complete runs of important journals.

Since January, 1958, approximately 15,000 volumes have been added to the library. However, at least one third of these items are housed either in the business or law libraries or in departmental collections in the production area. On the basis of these figures it is apparent that the space require-



Upjohn Company
Pharmaceutical Library
Stack area

1 book stacks
2 reprint and information files
3 study carrel
4 search room
5 Chemical Abstracts bar
6 shelving for:
  Chemische Zentralblatt
  Beilstein
  Friedlander

ments as originally planned for the collection have been adequate.

In 1957, the specialized indexing project, including the Medical Literature Index and the Patent Abstract Index, required 540 catalog drawers. Sixty-drawer sections have been added to the 540 drawers of 1957, making a total of 980 as of today. An additional 60 drawers will probably be needed for Patent Abstract Index and Research Reports Index during the next five years, or a total of 120 drawers. The present facilities will adequately take care of these needed catalogs, but some type of documentation system may be necessary in the future.

Some minor changes have been made in the arrangement of the library. The three small rooms have been made into two larger rooms. This was due to the fact that the small duplicating machine had been replaced by a Xerox 914, requiring more space. The microfilm and readers were relocated in the stackroom in order to get this additional space. Some indexes have been moved from the search room to the reading room for added convenience.

There generally comes a time in the special library when the service seems to reach a plateau. The general routines common to all libraries are set up and put in running order; the special services geared to the industry are developed, and growth may be spectacular for a number of years; then this growth levels off until new developments in research make new services necessary. Space requirements had been met not only adequately but generously in planning the Upjohn Company Library for a ten-year period. The arrival at such a plateau period would seem to indicate that the facilities will be able to function for a longer growth period.

Space Planning Criteria for Hospital Libraries

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For purposes of planning criteria, space is considered to be that net area required to accommodate people and/or equipment related to a specific function or activity. The defined limitations of the space, both horizontal and vertical, are influenced by the nature of the activity for efficient performance.

Planning criteria for space requirements is a method or formula for translating work loads into square-foot areas. Work loads are the demands for defined space occupancies in terms of the type of activity, peak occupancy requirements, utilization, equipment, and personnel capabilities. These work loads have to be determined with full knowledge of the hospital program, mission, or objectives.

Since hospital objectives and missions do vary, we must not apply stifling stereotypes and standards to the programming and design of hospitals. We need planning criteria which are flexible and serve as a tool to translate specific functional work loads to constructed space. Many hospitals have been built to accommodate requirements that were determined by a shopping-list-reminder method without thorough reference to an analysis of the basic program and related work loads in terms of utilization, peak occupancy demands, and the like. Of the many fine hospitals which have been built, those which were planned most carefully had the benefit of a service that analyzed the program requirements and related the anticipated and/or projected work loads to space requirements in a more exacting manner.

How have space requirements for functional departments and services been determined? One criterion has been to relate the number and extent of various functional elements to the number of beds in the hospital. If the relationship of outpatient and inpatient activity were similar for all hospitals and if patient composition, by age and ailment, were similar and constant, a reference to the number of beds would be reasonable, but such is not the case in most instances. Another method has been the use of standard plans or prototypes. This application of a plan developed from one set of requirements to a different program is wrought with false expediency and will at best compromise the real needs. The perpetuation of any program for application to dissimilar space requirements and relationships is like a doctor resorting to a patient treatment without thorough diagnostic procedures. It is important that the construction concept and the finished building should not be realized until all major functional areas have been analyzed and the space allocated on the basis of actual work loads.

The departments and agencies which operate federal hospitals, in cooperation with staff of the Hospital Branch of the Bureau of the Budget, are developing space planning criteria for the major functional areas of hospitals. It is hoped that these criteria will assist in planning physical facilities that will best meet the needs of a particular hospital program in an economical manner. They should also expedite program and budget reviews.

Basic elements

How does all this apply to hospital libraries? We are developing a criterion for the welfare and recreational facilities of federal hospitals of which the library is one element. Insofar as libraries are related to hospitals and to the extent required, the major basic elements are considered to be bookshelving, seating facilities, librarian's office or administrative area, workroom, and storage for both patients and medical library accommodations.

What are the work-load data required for hospital libraries? How are they obtained and whose responsibility are they?

1. One must predict the ultimate number of volumes for the patients and the number of volumes and bound journals for the staff. This should be the responsibility of the librarian. How is this determined? Is it done on the basis of patient types, length of stay, degree of illness, or extent of other activities? This must be stipulated either in terms of the total ultimate accumulation or in terms of an initial collection with an added percentage accumulation to the accumulated ultimate.
2. The number of readers, both patients and staff, must be determined. Will this be done by observing the peak occupancy of a similar facility with comparable categories of readers? Will new methods or objectives, such as group-therapy reading techniques, influence the number of readers requiring space at one time? Will the scheduling of other activities affect the peak demand? Will the location of the library, within the hospital, influence its utilization? Whatever the influencing factors may be, the number of readers to be accommodated must be predicted as work-load data.
3. An inventory of library furnishings and equipment must be determined. The charging desk, card catalogs, dictionary stands, magazine or newspaper racks, book carts, and so on may be determined on the basis of certain minimum requirements with incremental increases according to increases in circulation and reading room occupancy.
4. The workroom and storage area for servicing

both the patients and the medical library must be determined. This space will be used for processing books, magazines, and journals; bindery preparation; and storage. It may require bookshelves, cabinets, work counters or tables, book cart storage, and the like.

5. Areas for group occupancy, whether as an alternate use of reading space or as a separate room, must be known.
6. The number of full-time librarians, trainees, or others requiring office-type space for activities related to both patients and medical library must be determined.

Translating data

After the above work-load data and other determinations have been made, the problem is to translate the data into net square-foot areas by applying criteria or factors. The work by the Hospital Branch of the Buréau of the Budget is still in a preliminary stage. Before any official publication or use is made of the various criteria elements, more research and testing will be undertaken, which may result in significant changes and refinements. In the work done to date, the following factors and calculations are under consideration as appropriate for determining library requirements:

First, the criteria for shelving and access aisles, in their present stage of development, indicate that the number of volumes per linear foot of shelf may be 7 for patients' books and 5 for medical or staff books. Therefore, the total number of patient volumes is divided by seven to determine the total linear feet of shelving required.

Divide the total linear feet of shelving required by the number of shelves in height to determine the total linear feet of shelving stack. Next, select the aisle width and shelf depth factor (9-inch shelf depth for patients' books and 10-inch shelf depth for professional books). Multiply the linear feet of shelving stack by the square foot of floor space factor, and the answer gives you the total space for patients' bookshelves and access aisles. For professional volumes, the total volumes should be divided by five instead of seven. Further calculations are made the same as for patient volumes.

Example:

$$\frac{\text{3,250 volumes (planned patient capacity)}}{\text{7 (volumes per linear foot of shelving)}} =$$

464 linear feet of shelving

$$\frac{\text{464 linear feet of shelving}}{\text{6 (number of shelves in height)}} =$$

77 linear feet of shelving stack

77 linear feet of shelving stack x 2.7 (square feet of floor space factor) = 208 net square feet for shelves and access aisles

Second, the reading area, whether individual chairs or tables and chairs, may be computed on the basis of 25 square feet per reader or seat.

Third, the space for equipment and furnishings, including a common charging desk for both patients and medical library, separate dictionary stands, magazine or journal racks, separate card catalogs and book carts, plus a newspaper rack for patients, will generally be provided. The space allocation for these items may be as follows:

Charging desk	50 square feet
Card catalog 2 @ 20 sq. ft.	40 square feet
Book cart or truck 2 @ 6 sq. ft.	12 square feet
Newspaper rack	25 square feet
Magazine or journal rack 2 @ 20 sq. ft.	40 square feet
Dictionary stand 2 @10 sq. ft.	20 square feet
Display unit	25 square feet
Total	212 square feet

Fourth, the workroom and storage area may be provided on the basis of a minimum of 120 square feet, or at a rate of 1 square foot for each 35 volumes (medical and patient) up to a maximum of 400 square feet.

Fifth, if the reading space of either the patients' library or the medical library is to be used for scheduled group occupancy for therapy or training in addition to normal voluntary use, then the amount of space may be dictated by the activity requiring the greatest number of occupants at one time. If, however, a separation is desired for group reading therapy, the space requirements may be based on 15-20 square feet per occupant in lieu of the 25 square feet listed under the reading area.

Sixth, the office or administrative space may be provided on the basis of 120 square feet per person for those who perform office-type duties as opposed to workroom-type activities.

Planning a Library in a Correctional Institution

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Any boy committing a delinquent act in the state of Minnesota and apprehended before his eighteenth birthday may, through Juvenile Court, be committed to the Youth Conservation Commission's Reception Center at the State Training School. All boys thus committed are received at the Reception Center located on the Training School campus.

The Reception Center supervisor compiles the information from the orientation personnel, academic school and/or shop instructors, probation officer, cottage personnel, psychologist, and psychiatrist and presents this information, along with his recommendation, to the Youth Conservation Commission Board, or "Commission" as it is commonly called, for disposition. The Commission makes the final decision as to whether a boy should be placed on probation or transferred to either of the two Forestry Camps, the Youth Conservation Commission, Vocational Institution, an institution for further diagnosis or treatment, or to the Training School proper.

At the time a boy is transferred to the Training School he is seen by a placement committee, placed in one of the six cottages, and assigned to an academic school, shop, or combination academic school and shop program. The Training School offers a full accredited school from the fourth through the twelfth grades and includes some remedial work, industrial arts, art, commercial subjects, and advanced math and science. The shop placements include the kitchen, bakeshop, paintshop, barbershop, printshop, shoeshop, carpenter shop, metalshop, laundry, tailorshop, autoshop, farming, engine room, gardening, janitor, truck squad, and errand boy for various offices.

Background of the boys

Two years ago we took a survey of 350 consecutive cases admitted to the Training School for I.Q. and school retardation. Of these 350 boys, 152 were enrolled in the academic school program, and the following is the over-all outcome of the survey. The average I.Q. of this group of boys was 97.4, but the average grade retardation was 2.8 years retarded in school. Of the 152 boys, only 22 were working at or above grade level, while the remaining 130 were 1-6 years retarded in school. This finding has a bearing on our entire Training School program, and all areas must be geared and set up with this in mind. The average age is 15.7, and the average stay is about 7½ months.

In planning space and location of the library in a correctional institution, it is imperative that a qualified architect and experienced librarian work cooperatively from the beginning with the institution administrator, to achieve "the level of functional efficiency and beauty found in the best schools and homes." The total library program should be clearly stated, including objectives, activities, services, and known requirements. The relationship of the library program to the total institution program should be studied. Only after this thorough study has been made should the architect begin to draw plans to meet the specifications.

Space factors and standards

Standards for number of books as set by the Committee on Institutional Libraries of the American Correctional Association are not less than 6,000 volumes, with at least 10 books per inmate. Institutions which have large groups of long-term prisoners should provide a minimum of 15-20 volumes per inmate. The collection will normally be reduced by at least 10 percent each year from obsolescence, wear, and loss.

The Red Wing Training School has about 3,300 fiction books and 1,700 nonfiction books currently on its shelves and in circulation on the campus. At 10 books per inmate we are well over the minimum requirements, but do not reach the 6,000 as recommended for any library.

The standards set for book shelving are: width, 3 feet; depth, 8-10 inches and 12 inches; heights, wall type, 6 feet 10 inches (6 shelves) or 5 feet 6 inches (4 shelves), aisle type (double-faced), 5 feet 6 inches (4 shelves), 3 feet 6 inches (2 shelves). The shelves should be adjustable, and the base shelf should be sloping for easier reading of titles. The Training School library has a total of 110 feet of shelving, 6 feet 10 inches high, along the three walls not covered by windows. All the shelving is 8 inches deep except for 8 feet, which is 12 inches deep and used for reference books. Along the 63-foot window wall are cabinets 3 feet high that are used for magazines, filmstrip library, and the vocational pamphlet library.

Information which should be stated for the architect includes: type of institution, type of inmate, institution philosophy and program, type of school, type of curriculum, relation of the library to the total institution, number of institutional personnel, number of inmates, library staff, and number of books and other library materials.

The location of the library within the institution is very important. First, it should be adjacent to the school program to serve, as any good school library serves, the needs of the teaching staff and students. It should not, however, be limited in its usefulness and accessibility to those formally enrolled in the education program, but should be conveniently located for use by all inmates and institution personnel. Every effort should be made to counteract the austere, cold atmosphere of the typical correctional institution.

The library in the Training School is located in the academic school building with a floor space of 1,450 square feet, being a room 63.5 feet x 22.5 feet. Figures for reader space range from 35 to 70 square feet per reader according to size of institution and total population. It is also recommended that the library should provide reading space for 5 percent of the institution's population. The library at the Training School can take care of 40 readers at a given time. If the daily population remains at 400 boys, it is above the standards set for library facilities in correction institutions.

Another part of the library that is important is a workroom, office, and staff library. The workroom should be adjacent to the library control center and to the librarian's office, with a minimum of 100 square feet per worker. The office should be accessible to the workroom, with provision for supervision of both library and workroom but with regard for quietness, concentrated work, and privacy for conferences with readers and staff. A minimum of 120 square feet for the office is desirable.

Staff library

The staff library should be accessible to the librarian's office but also made available to the rest of the staff. Shelf space should be available for about 900 books and 6 readers, with extra space for journals and storage. The Training School facilities fa a little short in these aspects, as our office, workroom, and staff library are combined in one room, 14 feet x 16 feet, or 224 square feet. Our staff library is very small, as our Central Office does not want staff libraries in each institution but would rather have one central library that can hold more volumes without duplication.

With the facilities we have and our objective to create an atmosphere of desire and interest in books and to support, broaden, and strengthen the institution's total rehabilitation program by providing the appropriate library setting, we decided after several consultations with the state correctional librarian that we must do something to encourage a better interest and turnover in our library books. Of the 6,500 books, only about 100 were being checked out weekly; since the thorough weeding was finished, about 300 are always out. Because the boys are reluctant to take a book from the easy reading section in the library, the volumes from this section have been infiltrated into the regular library shelves.

Another growing and popular section of the library is the file and section on vocations. We have strengthened this section of our library because records have shown us that many of our boys do not return to public school when they leave us but are additions to the overcrowded unemployment groups. The library is also used, at times, to display artwork, handmade projects, and models made by the boys in order to induce other boys into leisure-time activities and also to spend some time reading about these various objects on display.

The librarian is an important part of the program and can either increase or decrease the use of the library. The person should be an individual who is educated in library work, has a thorough understanding of youth and youth's problems, and must have a warm, pleasing personality. On the other hand he must be firm and able to set standards for the library and use of books. The library staff should be part of the education and treatment programs, responsible to the superintendent or associate warden in charge of treatment. In institutions where such titles do not exist, the library should be under the director or supervisor of education. In our program the librarian is classified as a special teacher, serves under the principal of the academic school, and is paid the same as any teacher in the school system.

All these facilities call for an expenditure of money. The minimum suggested to maintain a col lection is set at around $500 annually. A check of the three larger institutions in Minnesota shows that each has a budget of $600 for books. This does not include periodicals, magazines, and newspapers, as these subscriptions come out of the general fund or some other expense.

At the present time our cottages do not have an adequate reading room nor do the inmates use the library for reading during leisure hours. Each cottage group comes to the library one hour per week to check out books to be read in the cottage. In the new cottages we plan to have a small collection of books in each study or reading room. This will give the boys more selection as well as the opportunity of being able to read in a quiet reading room.

Architectural Barriers and the Handicapped, the Infirm, the Elderly, and the Physically Limited

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Picture, if you will, an island which is extremely small and which contains only one house—yours! Let us now assume that for some reason you have no access to the mainland, which can easily be seen across the water. The island itself constitutes your total life space or environment. Let us also assume that you wish for a chance to go to the mainland. However, as it is, everything you do in terms of learning, working, socializing, and playing is confined to this island—this very limited life space.

Suppose some group on the mainland learns about you and decides to build a footbridge over to your island. You now have the opportunity to expand your life space to include the mainland and all the cultural, social, vocational, educational, and recreational opportunities that are available there but are not present on your island. Whether you do or not is your choice. But now you have a choice!

In effect, we have placed many of the handicapped and older persons in our communities on just such an island. We do not see them on the mainland—or in the community—because we have unconsciously failed to provide them with an opportunity, a footbridge, to function as first-class citizens in the community. The few that do venture out are often forced, not so much by their disability as by concrete, steel, and wood, to be dependent on others. Seeing very few such persons among us, therefore, we falsely assume that this minority is so small that it really is no community-wide problem.

To give some concept of how large this group is, it has been estimated that there are over 250,000 persons confined to wheel chairs; 200,000 with heavy leg braces; 139,000 with artificial limbs, 5,000,000 with heart impairments; and 17,500,000 men and women over sixty-five years of age who would benefit by easier access and function within buildings *used by the public*, not just public buildings.

Not too long ago the severely disabled and aged were given very little assistance and were often relegated to a rear room or an institution. Yet, in the last few decades, America has come a long way in the care and treatment of disabilities through a variety of programs aimed at total rehabilitation. However, professional people in the rehabilitation fields are becoming increasingly frustrated on finding that rehabilitated clients are returning to community life only to find that they are blocked from putting training into practice. The purpose of our Architectural Barriers Project is simply the correction and prevention of this problem. It is intended to give these people an opportunity to participate as full-fledged members of the community.

Combating the problem

How are we proceeding to combat this problem? First, a major step was taken in October of 1961, when the American Standards Association adopted specifications for making buildings and facilities accessible to and usable by the physically handicapped. This was an excellent example of interagency cooperation, since over fifty groups and organizations joined with the President's Committee on Employment of the Handicapped and the National Society for Crippled Children and Adults in the research and development of these standards. However, as pointed out by President Kennedy in a letter of commendation to the Honorable Joseph Foss, then president of the National Society, this effort is valuable only if the specifications are transformed into the modification of present buildings and incorporated into new construction.

Briefly, the recommended specifications include:

1. *Site development.* Grading of the ground for one or more ground-level entrances should be planned. Walks should be at least 48 inches wide with a grade no greater than 5 percent.
2. *Parking lots.* Some parking spaces 12 feet wide should be reserved and identified for use by the handicapped. Care should be exercised in planning so that individuals are not compelled to wheel or walk behind parked cars.
3. *Ramps.* A ramp, interior or exterior, should not have a slope greater than 8.33 percent. Ramps should have nonslip surfaces, at least one handrail, a level space at the top, and at least 6 feet of clearance at the bottom.
4. *Entrances.* One primary entrance should be usable by persons in wheel chairs, and, if there is an elevator, it should be accessible from this entrance.
5. *Doors.* A clear opening width of no less than 32 inches for all interior and exterior doorways is needed. All doors should be operable by a single effort. Revolving doors cannot be used by those in wheel chairs or on crutches. Thresholds should be as nearly level with the floor as possible.
6. *Stairs.* These are, of course, the number one enemy of the wheel-chair user, the crutch-walker, and the cardiac. Where they must be used, it is recommended that the height of the riser be not more than 7 inches and that the commonly used nosing be discarded for a type of riser and tread without any abrupt change of surface. At least one handrail should be extended 18 inches beyond both the top and the bottom steps.

7. *Rest rooms.* There should be adequate space for individuals in wheel chairs to enter. At least one toilet stall, with the door opening out, should be wide and deep enough to accommodate a wheel chair. This stall should be equipped with handrails on each side.
8. *Other features.* Water fountains should have spouts and controls usable by persons handicapped or in wheel chairs. The new designs of wall-mounted drinking fountains, when placed at the proper height, meet the requirements for use by the handicapped. A telephone equipped with volume controls for the hard-of-hearing and within reach of those in wheel chairs should be available.

In their entirety, the American Standards Association specifications are much more inclusive and specific with respect to dimensions, use of materials, and methods of construction for the physically handicapped and the aged.

Many of the newer libraries of all kinds have been designed and built with many of these features included. In some buildings, a few minor adaptations would make the difference between barring the handicapped and the aged and welcoming them with *open doors.* Other older buildings may require ramps or other changes to make them accessible. The planning or modification of any library to make it accessible and usable by the handicapped and aged will accrue benefits to all who visit and use it.